Somali Democratic Republic

# FIVE YEAR DEVELOPMENT PROGRAMME

## 1974 – 1978

**MINISTRY OF PLANNING AND CO-ORDINATION**
**Mogadishu, 1974**

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# FORWARD

As will be apparent from reading the contents, the Development Programme presented in this document is different from all the previous programmes experienced by our country. This is so for a number of reasons.

For one thing it has been prepared and approved several years after the glorious October 21st Revolution and hence has more depth in essessing the needs of the country in a new perspective. Secondly it encompasses a wider span of time — five years instead of the usual three years. Thirdly it is much more ambitious not only in its scope but also in the emphasis given to the mobilisation of local resources. To illustrate, total envisaged investment in the present programme is So. Shs. 3,863,357,000 while that of the previous programme for 1971 - 1973 was around So. Shs. 999,943,000 only — in other words the amount expected from internal resources alone, which is So. Shs. 1,260,393 (32.6% of the total investment), is greater than the global investment of the previous programme.. Again, if we look at the sectoral distribution we see that the priority has not only been changing but has been shifting towards the directly more productive sectors. To mention few examples: the share of agriculture and forestry in the total planned investment was 7.7% in the 1968-1970 programme, 12.2% in the 1971-1973 programme and 30.4% in the present programme; industry, power and mining came up with 5.4% in 1968-1970; 12.9% in 1971-1973 and 19.9% in the present programme; basic infrastructure (i.e. transport and communication) took up 70.8% of the 1968-1970 programme, 47.3% of that of 1971-1973, and 24.5% of the present programme. This change in priority reflects not merely the passage of time but the revolutionary determination to achieve self-sufficiency in food production and essential consumer items and to lay a solid foundation for further industrialisation.

All these points are expanded upon in greater detail in the chapters on «Objectives and Strategy» and «Financing and Implementation». I have no intention of re-iterating the details. However, in this forward I would like to discuss briefly the purposes, problems, and methodology of planning in the wider context of social change.

Planning has been recognized as an essential instrument of the society to change its present into the image of its future by its own will. This will cannot the blind: the aspirations must be tempered by the possible; and the limits of the possible are rooted in the objective conditions (and hidden potentials) of the present. Marx has long ago pointed out that «philosophers have interpreted the world; the point is to change it»

*And certainly in our world of poverty and hunger there is a lot that cries for rapid change.*

*Rapid social change will not come by itself automatically. Rather it is the resultant of man's constant interaction with his material enviornment. To understand the nature of this enviornment and its basic laws is a prerquisite. Such an understanding will enable one to utilize them fully and strike on the right path.*

*When one speaks of social change one has in mind the total balanced progress of the community — the continued rise of living standards, equitable distribution of the national dividend, advancement of cultural standards and health conditions. It is only a truism to say that such balanced social progress must have its basis on the continued expansion of material production : all the forces of production, whether natural or human, must be fully harnessed to realize their potential.*

*The capitalist countries who had the earlier start in industrialization had found their own way to material progress. The advancement of science, the discovery of so-called virgin lands, the subjugation of other peoples and nations into empires and slaves, the super-exploitation of the workers and peasants of Europe itself — such has been the unique historical configuration that gave birth to capitalism and its technical progress. «Capital», as Marx has said, «has come into being dripping with blood».*

*If such has been the tortuous road traversed by the advanced west what path is now open for the former colonial and present neo-colonial countries where the substructure of material backwardness and superstructure of imperialist subjugation have interacted so forcefully as to create a situation of continued backwardness and poverty ?*

*To opt for capitalism as remedy for social and economic backwardness for such areas shows not only complete lack of historical knowledge but also a naive understanding of the realities of the present. Are not the so-called under-developed countries already functioning under the capitalist system, though sometimes in a primitive and distorted manner ? Haven't they been engulfed for decades under the global octopus of imperialist economic expansion ? Is it then realistic to prescribe for the sick the very malady he is suffering from like a dying diabetic who have more sugar ?*

*Evidently, there is no way out but break out of the dependency on metropolitan capitalism and build independent economies based on the real needs of the people. How can planning then enhance this task ?*

*In many former colonial countries planning is viewed merely as mechanical process for co-ordinating and increasing the national output. For this purpose foreign experts are hired, and even if the personnel «exper-*

*tise» is local they may be hampered by their training itself so long as the approach is limited to technical considerations.*

*More often than not such approaches utilise macro-economic analysis that has been developed in a different climate for different situations. Such economic aggregates as, the level of savings, investment, expenditure both on the private and national levels ,and imports and exports are estimated in order to produce a growth model for a certain period of time. It will be noted by reading the present document that we have not used this technique at all, not because is has no intrinsic value but because the basic assumptions for its usefulness — a completely monetized economy and adequate and reliable statistical data — do not pertain in our situation, and we have no desire to produce documents that may turn out pipedreams in the end.*

*Even if these conditions did apply «pure» economic analysis as such will still have serious limitations in a post-colonial situation?. Models obtained from such an analysis will be projections of historical and present production and consumption patterns. Such patterns have been inherited from the colonial era and are themselves the hidden culprits inhibiting development. The point there is transform rather than project them. them.*

*Seen in this light the role of planning in a post-colonial revolutionary situation becomes clear. The main objective of planning should be to fundamentally change the existing patterns of demand and production in order to generate the internal linkages necessary for a self-sustained economic growth (This is not an argument for closedness — but we cannot go into this here). Planning cannot also be isolated from other socio-economic phenomena. The planning process must be well-integrated with the political and administrative processes. The masses of the people must be fully mobilized and involved in the preparation process, so that planning may reflect their real needs. It must also be fully co-ordinated with all sectors of the administration so that planning decisions can be fully implemented. Within this broader social context the techniques of economic analysis, whether macro-or micro can find their relevent place.*

*Needlees to say the present Five Year Development Progrmme is not perfect but it clearly reflects the basic strategy explained above. It may not be a technically consistent, symmetrical and fine document, but it certailny covers basic, necessary and implementable projects and schemes. After all the proof of the pudding is in the eating.*

*(Ibrahim Megag Samantar)*
*Secretary of State for*
***Planning and Co-ordination***

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## SECTION A :

## REVIEW OF THE ECONOMY, 1971 - 1973

The trend established since the 1969 Revolution of strengthening the role of the public sector in national economic activities, stabilising producer and consumer prices, increasing employment opportunities, managing more rationally the State and foreign exchange budget, intensifying government actions in supporting decentralisation of administration to encourage greater participation by local government organisation in nation building activities and such other actions continued throughout the period under review.

Government budgetary and monetary policy which support government action has reflected during the period the structural changes which have been seen since 1970. The following table shows the variation in government revenue and expenditure since 1969.

(So. Shs. million)

| ITEM | 1969 | 1970 | 1971 | 1972 | 1973 |
|---|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) | (6) |
| Revenue | 301.530 | 327.928 | 330.000 | 404.700 | 470.600 |
| Expenditure | 301.530 | 311.027 | 306.000 | 343.722 | 396.146 |
| **Balance** | — | **16.901** | **24.000** | **60.978** | **74.454** |

From 1973 onwards the scope of the government budget has expanded to cover the public agencies and enterprises as well as resources of the Regional and District Councils. Inspite of this change in definition, the overall trend in improved budgetary position is evident in the table: from chronic deficit, the State finances have moved towards greater economy in ordinary expenses and greater incomes from existing sources so that internal resources available for development expenditure has increased progressively. This highlights government's efforts for mobilising internal resources to the maximum. Taxes on income and property showed the greatest rate of growth during this period. Taxes on production, consumption and domestic transactions have also been marginally increased for mobilising greater resources.

Government established a Development Fund outside the Current Revenue account during 1972 to be financed from the depreciation funds of public enterprises and to be used for the development budget of the Central Government. This was the first step in introducing greater control of the funds of the public enterprises and utilising them for maximum development impact.

The 1971 - 1973 Development Programme has also witnessed increased money supply in the system which is indicative of the growing monetisation of the economy as well as expansion in economic activity. The following changes have been recorded during the period since 1970

**Money supply in So. Shs. million**

| Year<br>(1) | End of June<br>(2) | End of December<br>(3) |
|---|---|---|
| 1970 | 211.919 | 314.23 |
| 1971 | 288.284 | 333.881 |
| 1972 | 365.748 | 440.804 |
| 1973 | 448.500 | — |

The increase in money supply in 1971 was mostly due to additional credit to public enterprises while the increase in 1972 and 1973 was matched by increases in production and export in the livestock, agriculture and industry sectors as well as enlarged scale of public spending on development projects.

The revolutionary changes in the economic setup of the country since 1970 placed a special responsibility on the banking system and thus the aim of the nationalisation of the privately owned commercial banks in 1970 and the creation of a new banking structure in 1971 was to enable these institutions to meet the enlarged development responsibilities of the economic system.

Inspite of the need for liberal credit policy to encourage development, the banking system had to follow up the restrictive financial policy of the government and the effects of the protracted drought, by a limited increase of 2.5% in credit. This restrictive policy improved the debt position of the government with the banks. Expansion in credit to the private sector was also limited to about 5%. Money supply however increased because of increase in foreign resources inspite of the fact that the foreign trade situation reflected the exceptionally low production trends and global demand. Yet the deficit in the trade balance narrowed by 36.5%; imports decreased by 18% and exports by 6%. There was almost absolute price stability during the year.

Production in 1971 was again affected by insufficient rains and government continued its restrictive fiscal policy. Bank credits increased by 4.5%; loans to the private sector and public entities rose by 19%. The increase in credit to public entities was mainly necessitated by the change in stocking policy of the National Trading Agency and its expanded role in internal trade and the requirements of the Agricultural Development Corporation for its large scale grains purchase programmes. These increases in demand for credit were neutralised partially by a decline of 52.1% in governments indebtedness with the Central Bank.

In spite of considerable increase in foreign resources during the year, there was a less than proportionate increase in money supply by 6.3%. This is due to the nature of increase of reserves which were increased by the allocation of SDR's by the IMF and inflow of specific foreign assistance which was used for repayment of government's debt to the Central Bank. A limited increase in money supply was also due to a large increase in time deposits.

The foreign trade deficit increased in 1971 by 29.6% as a result of increased imports of cereals. These actions in the main helped in maintaining an almost stable consumer price index for Mogadishu.

With exceptionally good weather conditions, agricultural and livestock output increased considerably in 1972. The banking system supported this performance with a total credit expansion of 16.3%. Commercial loans expanded rapidly while government continued to reduce its indebtedness to the banking system and reached a credit position of So. Shs. 24.8 million. Money supply increased by 32.0% mainly as a result of the purchasing operations of the ADC and the very large expansion in livestock export. The ADC's operation were monetising the traditional agricultural sector fast. The foreign trade position also improved during 1972 with an increase of 46% in exports and only 26%

in imports. Inspite of all these, the consumer price index declined by 3% as a result of administrative action to fix prices of essential goods and services. House rents were reduced by 20% through a government decree. At the end of the year the foreign reserves were equivalent to So. Shs. 293.3 million and the prices were declining. The economy was therefore in a position to utilise expanding credit facilities by the banking system and government could enlarge development investment.

The first half of 1973 witnessed an expansion of 15.7% in bank credit to the economy mainly flowing to the private sector and the public entities. A limited rise of 1.7% in the money supply during this period showed that the credits were mainly used for financing imports mostly of construction material, machinery and emergency stocks of essential consumer goods.

The banking system continued to follow a liberal credit policy inspite of declining foreign reserves position. The decline has been ascribed to the utilisation of foreign reserves which have been earmarked for expenditure on development projects.

The latter half of 1973 was adversely affected by the worsening international price situation and import of inflationary pressures. This inflationary tendency has also been strengthened by the increasing expenditure on development especially on infrastructural projects, even though a part of the potential pressure was lessened through increased self-help activities in the country.

Diversification of origins and destination of import and export trade continued during 1971 - 1973. This is particularly noticeable in the export of bananas. In the case of imports, diversification has followed the changing source pattern of commodity grants and loans.

The nationalisation of internal and import trade in the major essential consumer goods which while setting a more rational direction of trade, stabilising the consumer price index and laying down a price policy, should also be seen as part of an incomes policy which seeks to reduce as much as possible the rural-urban disparities in incomes and prices. The major instruments of this policy have been the crash programme, the grain marketing organisations, the encouragement of self-help in both public and private institutions and the decentralisation of administration to the local level.

Price stabilisation of cereals has increased incomes of producers as well as the real incomes of consumers. Similarly the equalisation of price of all commodities throughout the country through a system of averaging transport costs has also helped in increasing real incomes in rural areas in various regions compared to urban centres.

The future prospects regarding stabilised prices for consumer and producers at least during the coming programme period does not seem to be very bright due to the large uncertainities in the international economic situation. Indications are that the country will continue to suffer from the effects of large scale import of inflationary pressure which had already begun during the second half of 1973. This will adversely affect import of consumer and investment goods but need not be matched proportionately by increasing prices for exports of primary products. The inflationary pressures exerted by the international economic situation and the concomitment increase in such pressures for development spending along with normal rate of increase in price levels as a result of such spending is likely to affect the standard of living of the people adversely unless the productive capacity of the economy is drastically increased.

## Commodity Production and Services

## Livestock, Range and Forestry Development

The level of export and utilisation of livestock and its products has been rising during the past years as seen from the following:

### LIVESTOCK EXPORTS - 1968-1972

("000" heads)

| ITEM | 1968 | 1969 | 1970 | 1971 | 1972 |
|---|---|---|---|---|---|
| Cattle (1,000 heads) | 42.5 | 33.1 | 45.0 | 56.0 | 58.0 |
| Sheep (1,000 heads) | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| Goats (1,000 heads) | 442.9 | 861.4 | 605.0 | 576.0 | 565.0 |
| Camels (1,000 heads) | 18.7 | 24.9 | 26.0 | 24.0 | 16.0 |
| Cattle hides (1,000 heads) | 137.8 | 107.2 | 210.0 | 378.0 | 331.0 |
| Sheep skins (1,000 heads) | 1,536.0 | 1,367.0 | 2,010.0 | 1,455.0 | 868.0 |
| Goats skins (1,000 pieces) | 1,531.0 | 2,533.0 | 2,136.0 | 2,326.0 | 1,195.0 |
| Camels hides (1,000 pieces) | — | — | 15.0 | 15.0 | 25.0 |
| Meat (Tons) | 1,022.0 | 1,104.0 | 2,159.0 | 5,026.0 | 3,026.0 |

Animals slaughtered in public slaughter houses

| ITEM<br>(1) | 1969<br>(2) | 1970<br>(3) | 1971<br>(4) | 1972<br>(5) |
|---|---|---|---|---|
| Camels | 30.260 | 21.530 | 31.491 | 43.618 |
| Cattle | 83.044 | 49.135 | 143.276 | 156.503 |
| Sheep & Goats | 296.103 | 286.564 | 438.259 | 347.519 |
| **Total** | **406.407** | **357.229** | **613.026** | **547.720** |

The increase in slaughtered cattle is mainly due to increased quantity of processed meat for export while increases in slaughtering of other types of animals point to increased internal consumption. The record in the table does not include slaughtering in the rest of the country which supplies as much meat as those supplied from public slaughter houses.

The increase in export of live animals in 1972 has also been paralleled by increase in production of processed meat, most of which is exported. The Kismayu Meat Factory increased production in the following manner:

| YEAR | Total Processed Meat including fat (Kilogramme) |
|---|---|
| 1969 | 641 |
| 1970 | 5.383 |
| 1971 | 16.077 |
| 1972 | 21.765 |

The Sopral factory in Mogadishu produced 1.836 metric tons of exportable meat and products during 1972. Preliminary estimates of exports and processing showed that 1973 has not been as good a year as 1972 because of a decline in the supply of animals. The major reasons for this is presumed to be the favourable weather conditions and the unwillingness of the livestock owners to sell their animals. There was also a spurt in livestock trading activity in 1972 due to the fact that with nationalisation of trade in a number of commodities the original private traders shifted attention to livestock trade.

In spite of the fact that there has been increasing demand in the world market for meat and meat preparations with a concomitant increase in world prices, preliminary estimates of livestock as well as meat export shows a lower level in 1973 compared to the exceptionally high level of 1972. Due to lack of basic information on the livestock sector it has not always been possible to plan the production, utilisation and export in the most rational manner ensuring a continuing, increasing supply of animals.

The 1971-1973 period saw the intensification of development activity by the government in the four major aspects, animal production, disease control and eradication, marketing and industrial processing. The projects for intensification of animal health, the joint renderpest campaign and the operation of the parasite treatment centres continued. Disease control programme was given major support through the decision made towards the end of 1972 that from 1973 supply of vetetinary drugs will be made free of charge. The extension of the project for the Training School for animal Health Assistants beyond 1972 has strengthened the disease control programme.

The Livestock Development Agency has been active in the field of animal production and marketing. The Agency implemented projects for purchase, sale and export of livestock, establishment of staging points for sheep and goats in the northen regions, establishment of holding grounds and improving the facilities for livestock at the smaller ports in the country. The Agency also operated a dairy farm at Afgoi where in addition to a programme of milk production, initial work has been carried out in improving the local breed of cattle and fodder production.

The projects for improving the Hides and Skins industry in the country have also continued to be successfully implemented.

The overall level of implementation of development projects in the livestock sector has been high and with the addition of some new projects in the Development Programme, the total outlay of So. Shs. 51.067 million during the three year period represents 91.5% of the original target of expenditure.

The most significant achievements in range and forestry development has been in the first place the action taken by government in designating 18 controlled grazing areas in order to conserve and reactivate range areas which have been degenerating dangerously. A project for sand-dune afforestation was implemented in Merca stopping the danger of their expansion into potentially useful agricultural land and civil establishments. The project was implemented by the joint action of the Crash Programme volunteers and the National Army.

**Agriculture and Irrigation**

During the period under review the intensification of crop production, agricultural diversification and reorganisation continued. Estimates of production of the major crops in 1972-73 are as follows :-

**1972-1973 Production Estimates**

| CROPS<br>(1) | | Areas (Ha)<br>(2) | Production (Qts)<br>(3) |
|---|---|---|---|
| 1. | Sorghum | 450.000 | 1.550.000 |
| 2. | Maize | 120.000 | 840.000 |
| 3. | Wheat | 3.500 | 10.500 |
| 4. | Rice | 20 | 400 |
| 5. | Oil seeds | 34.900 | 139.600 |
| 6. | Cotton | 2.500 | 22.500 |
| 7. | Tobacco | — | — |
| 8. | Sugar cane | 6.000 | 15.000 |
| 9. | Grape fruits | 300 | 21.000 |
| 10. | Bananas | 8.939 | 1.340.850 |
| | TOTAL | 626,159 | 3,939,850 |

The Crash Programme and the Grain Marketing and Price Stabilisation projects have remained the two central projects for transforming the traditional agricultural sector. The agricultural Crash Programme was reorganised as an autonmous agency with powers to recruit and organise poineer corps. Among its function the agency has the responsibility to establish state farms and settle nomads in agricultural areas. By the end of 1973 the Programme had the responsibility of cultivating 7,550 hectares in different areas and employing 6,000 persons.

The activity of the Grain Marketing project had its impact on grain prices both for producers and consumers. The average ratail price of sorghum and maize in the Mogadishu market which was So. Shs. 1.26 Kilogram and 1.33 per kilogram respectively in July 1971 was reduced to So. Shs. 075 per kilogram for both in July 1972. This occured along with an assured economical price for the producers. The marketing project has stimulated increased production of cereals. Grain storage capacity was also being enlarged and by the end of 1973 it stood at 95,320 tons compared to an installed capacity of 29,000 tons at the end of 1971. Additionally some small size stores were also rented by the ADC.

At the agricultural infrastructure level, the Central Agricultural Research Station continued its activities and has been able to contribute towards providing better seeds and improving cultural practices. The extension services utilising the results of agricultural research also gave assistance to nearly 65 agricultural cooperative societies in land clearance, construction of canals, supply of water pumps and improved varieties of seeds. These cooperatives with 3,500 members have been cultivating nearly 9,000 hectares of land.

The work at the Farmer's Training School at Bonka, Genale and Aborein was also intensified during the period. Extension service was supported by the Farm Inputs Services of the ADC while the latter continued its machinery services to the farmers. The size of the machinery pool was increased by the acquistions of 176 new tractors.

Inspite of the detalied plans for restructuring the banana industry progress in implementation of the project was limited. The export of bananas however increased in quantity to the newly opened market in the Middle East.

The Afgoi-Mordinle Project which has been planned to introduce optimum scientific agricultural practices in irrigated cultivation over 3,000 hectares of land started functioning in 1972 and progressed according to planned schedule of work.

In the field of irrigation a number of small projects were implemented through self-help. Negotiations for financing construction of an irrigation dam at Fanole on the Juba River and for an irrigation-cum-agriculture project near Balad were completed.

A significant development during the period has been the promulgation of a Cooperative Law in 1973. Following on this, a department for agricultural cooperatives has been established in the Ministry of Agriculture to assist in the development of the cooperative movement in the country.

## FISHERIES

A separate Ministry of Fisheries and Marine Transport was created during the period under rexiew as a result of the reoganisation of the Ministry of industry. The activities in the fisheries sector consisted of the continuation of the survey work of the Fisheries Survey project, helping in the supply of fish to the industrial processing units and the formation of fishermen's cooperatives. A Somali-Soviet Fishing Expedition of four fishing vessels and 400 motor boats started operation from the end of 1972.

## NATURAL RESOURCES

Development of natural resources was concentrated on the operation of the Mineral and Ground Water Survey, development of water resources and preliminary work on the commercial exploitation of tin and piezo-quartz deposits in the country.

In the field of mining and geological surveys, the exploratory work on uranium, piezo-quartz, copper, manganese, lead and zinc occurrences in the northern regions and the black sand deposits in the Lower-Juba regions was continued.

The ground water survey located new areas of water potential which were considered earlier as waterless.

Water resource development during 1971-1973 consisted of digging 44 deep wells and a number of shallow wells and "burkeds". The Mogadishu, Hargeisa and Kismayu water supply projects were commissioned during this period and studies for water supply to Beletwein, Galkayo, Baidoa and Gardo were completed.

## ELECTRICITY AND POWER

The expansion of electricity generating capacity in the country during 1971-1973 consisted of installation of 50 generating units in the regions of a total capacity of 3,744 K.W. and increasing the capacity at Mogadishsu by 6,400 k.w. Two major revolving funds, one for the provision of spare parts and the other for the distribution of equipments have been created under the control of the ENEE. Two stationary workshops and two mobile workshops have also been established.

Government took over the ownership of the privately run power units in the country and entrusted the responsibility of running them to the local governments.

## MANUFACTURING INDUSTRY

Government under took determined measures towards the rational organisation of the industrial establishments in the public sector. The 14 public sector enterprises out of a total of 176 employing 5 or more workers accounted for 58% of industrial establishments, 76% of the value of gross output, 89% of value added and 50% of gross fixed capital formation early in 1970.

In addition to better organisation of production, government through financial administrative measures initiated a mechanism for central control of financial responsibility and operations of the industrial undertakings.

The value of output of the public sector industrial establishments which was So. Shs. 94.1 million in 1971 increased by 23% to So. Shs. 115.7 million in 1972. The Kismayo meat factory recorded the highest growth rate during this period. The cyclons during 1971-1972 adversely affected the raw-material supply position of the Laskoreh Fish Factory and critically affected the factryo and its operations. However comparing the overall position of export of fish and fish products from Somalia there has been an increase of value in 1972 to So. Shs. 5.198 million from So. Shs. 2.638 million in 1971. During the first half year of 1973 value of exports was So. Shs. 12.378 million.

Shortage of milk supply to the Mogadishu Milk Factory continued inspite of the efforts of the LDA to develop a dairy farm at Afgoi.

Somaltex completed by 1972 its project for replacement of machinery in spinning and finishing departments. The Sugar Factory at Jowhar reached a modest profitability during the period but deferred its plans for expansion and instead supplementary production facilities for the manufacture of plastic-shoes and sandals, plastic bottles, shampoos and detergents were created. Government in the meantime decided on the establishment of a new sugar manufacturing complex in the Juba river areas.

Three projects namely the polyethyline sheets section of the corrugated container factory, four grain mills and a fruit canning and tomato paste factory were implemented by the Somali Development Bank during 1971-1973.

Work on the cigaratte and matches factory continued according to the scheduled programme and the factory started trial production in 1973. The project for the establishment of a foundry also progressed.

There has also been some investment on new plants which were not part of the Development Programme. There are reactivations of the Soplast and a confectionary factory at Mogadishu, a pickling plant in Burao and a brick factory at Afgoi.

Government initiated work on construction of a cement factory of 100,000 tons annual capacity near Berbera to utilise the gypsum deposits at Surya Malableh. Government also supported a survey-cum-preliminary feasibility study during 1973 of industries and their potential in the country to assist in future planning of industrial development.

The reorganisation of the Ministry of Industry has enabled the establishment of an Industry Development Unit for the planning and development of industry including small-scale industries and for the management of the public sector establishments.

Workers' participation in the management of industries has been introduced and social, cultural and recreational facilities have been improved in all the units.

In terms of planned outlay in the Development Programme 1971-73, the industry sector has recorded an achievement of 89% fulfillment of financial targets with an investment of So. Shs. 78.168 million.

## TRANSPORT AND COMMUNICATION

Engineering and administrative consultancy to the highway department by the Highway Development Project continued throughout the period. In road construction activities, the most significant operations were the starting of the construction of the arterial Beletwein-Burao road; the completion of the construction of the Afgoi-Baidoa road, the starting of the Hargeisa-Berbera road construction, resurfacing of the Jowhar-Bulo-Burti roads and the construction of a network of feeder roads through self-help action. During the period under review, survey and engineering studies of Burao-Berbera, Golwein-Gelib and Hargeisa-Borama roads have been started.

The construction of a new airport at Kismayu was begun in 1972 and the project for a flight information centre at Mogadishu has been completed. An airport for Baidoa was also completed.

Work on the construction of the Mogadishu Harbour on a revised an enlarged scale was started in 1973.

A development with great popular appeal has been the introduction of a public transport system for the city of Mogadishu by the Local Government. The system has started to operate with 21 buses routed across the main centres of the city. The Government strengthened, in addition, the transport services in the regions.

In the field of communication a postal headquarters has been constructed and a meteorological as well as a telex printer service established. The capacity of the Mogadishu telophone network has also been increased.

A total of So. Shs. 190.888 millions has been spent during 1971-1973 for the development transport and communication facilities in the country.

## EDUCATION

Two major decisions were made in October 1972 which are of fundamental significance to development of education in Somalia. These are the adoption of a Somali script using latin alphabets and the nationalisation of all private educational institutions which accounted for nearly 24% of the school population in 1972.

Basic work for adopting a Somali script had gone on for sometime and when finally the decision was announced to use Somali alone as the official language for education and administration a vigorous campaign was started to assist the population in this direction.

To facilitate the introduction of Somali language as a medium of instruction 150,000 volumes of 12 textbooks for all elementary grades were distributed during 1972. During 1973 Somali books were introduced in the intermediate grades 5 and 6. A two-week course in the use of the language was held during the summer of 1973 for 2000 teachers.

In the field of primary and intermediate level of education intake into grade I was increased 35% in 1972 and a further 25% in 1973. In all, approximately 628 class rooms have been completed in both towns and villages during the 1971-1973 period. The intention has been to continue all primary school leavers into the intermediate level courses. To meet the shortage of teachers, 750 National Service volunteers were recruited as termporary teachers during the 1972-1973 school year.

During 1973, 7,320 students were attending secondary schools, representing roughly 45% of the intermediate school leavers. Seven new schools built during 1971-1973 and capacity of some of the existing schools has also been increased as well as dormitory space. Agreement was reached in 1972 for the establishment of a polytechnic. The maritime vocational school was converted into a technical school and the foreign schools were integrated into the system after nationalisation.

Efforts to upgrade the teachers continued during the period under review. The pupil-teacher ratio has continued to remain low. The new project for Teacher and Vocational Training assisted by the UNDP-UNESCO-ILO started in 1972 two programmes of teacher training; one a 4-year degree course for secondary school teachers and the other a 2-year diploma course for primary school teachers. The capacity of the National Teacher Education Centre was in the process of enlargement during the period from 300 to 900.

The Ministry of Education has also been active in organising political and revolutionary education for youth and 5 summer youth camps have been in operation. More attention was also given to Women's Education and 18 centres have been training women as instructors or teachers of home-economics as well those who will teach in the Reformed Quranic Schools.

A new act for the National University which was established in 1969 was under preparation during 1973. Seven faculties were in operation, namely, Economics, Law, Agriculture, Medicine, Veterinary Science, Education and Science. In addition to the existing staff of the College of Education, 47 Somali assistant professors were newly appointed to the University faculties. There was no intake of new students into the university in 1972 because of the newly stipulated requirement for compulsory National Service for 18 months for all secondary school graduates.

The Revolutionary government has initiated a nation-wide literacy campaign which will in its first phase concentrate on the urban population and later on expand to rural and nomadic areas.

The old Ministry of Education was reorganised into two new ministries, the Ministry of Education and the Ministry of Higher Education and Culture. This reogranisation has helped in laying the foundation for future restructuring and streamlining of education administration in the country.

The shortage of qualified teachers and the internal financial resources continued to remain major constraints to development of general and technical education in the country, inspite of the all-round enthusiasm of the people to construct schools on a self-help basis.

## HEALTH

During the period 1971-1973, the increase in medical institutional facilities has been as follows:

| ITEM | NUMBER |
|---|---|
| Hospitals | 12 |
| Dispensaries | 38 |
| Hospital beds | 1,120 |

The major health problems continued to be tuberculosis and malaria and venereal diseases in the urban areas.

With effect from 1st March, 1972 Government nationalised the import of drugs and medicines in the country. The National Pharmaceutical Agency has since then been importing all medicines and distributing them to the public through cooperative pharmacies which have been already established in all the towns. Government also nationalised the practice of medicine and all doctors are required to work full-time for government both during the usual working hours and again in the afternoons to administer free medical care to the population. Since 21st October 1972 hospitalisation including medicine and diagnostic facilities have been made free of cost to all patients admitted in government hospitals.

## PUBLIC ADMINISTRATION

The re-orientation courses for the higher and middle level cadres in government and quasi-government employment continued throughout the period under review. These courses have given the administration an opportunity to evaluate the personnel and repost them to positions suitable according to their efficiency and ability.

The first steps in achieving the aims of decentralisation of administration into the regions and districts were taken under the law for Local Government Reform passed in June 1972. The Law established Regional, District and Millage Councils with powers to initiate and implement development activities with a greater measure of autonomy and also powers to carry out adminstrative functions and services on behalf of the Ministries and Autonomous Agencies. The functions of the Regional and District Councils undertaken by 6 committees under each of them, Economic Development Committee, Social Committee, Committee for Social Defence and Public Security, Financial Control Committee, Political Orientation Committee and Mediation and Centralisation Committee, The finances of these councils are to be obtained from local fees and taxes, deducation of profits and other payments from enterprises and bodies within their jurisdiction and subvention from the Central Government.

Government also passed legislation in 1972 on the establishment of Political offices at the Local Government level which will have an impact on the overall public administration through these offices functioning as organs for political orientation and national guidance of the people and as a link between the people and the administration. The Law of 11 May 1972 on the Coordination of Self-help Schemes and the establishment of a National Council for Coordination of Self-help Schemes will also link the Local Government administration more intimately with the people and the central administration. The law makes it possible for the first time to coordinate at the national level in the development programme all development activities autonomously implemented at the local level.

A Public Administration Inquiry Commission was established early in 1972 to advise the President of the S.R.C. on matters of public administration and to ensure that the public adminstration is run on the basic principles enumerated in the First and Second Charters of the Revolution.

A significant step was taken when Law No. 58 of 31ts July 1972 on the Finance of Public Enterprises and Agencies was passed. The accounting and expenditure procedures of the finances of public enterprises have been unified and provision has been made for the compulsory sharing of profits with the Central Government. A turnover tax has been instituted while profit sharing with the Central Government is to be made on the basis or proportions to be decided by the Ministry of Finance. The 1973 Budget of the State reflects the new procedure. The budgets of the local government along with the budgets of the autonomous agencies and public enterprises have been consolidated into a unified Budget of the State beginning from 1973. A reorganisation of regional administration of the country into 15 regions and 64 districts has been done to make local government administration more effective.

In addition to projects in the 1971-1973 Development Programme, extensive development activity was witnessed all over the country through the National Campaign for Self-help and Socialist Development. No estimate of capital formation in the private sector has been made, but it is known that substantial development has been taking place in livestock and agricultural sectors.

The following table summaries the sectoral financial outlay on the projects in the Development Programme 1971-1973 and shows the percentage level of achievements in terms of the originally planned outlay.

It has also been of significance that the implementation of the Programme was assisted by the establishment of annual programming of development.

(So. Shs. 000)

| Sl. No. | SECTOR | OUTLAY 1971-1973 Planned | Actual | % of actual to planned |
|---|---|---|---|---|
| 1. | Livestock | 59,385.8 | 51,067.2 | 85.9 |
| 2. | Agriculture | 107,721.0 | 64,549.0 | 59.9 |
| 3. | Irrigation | 38,889.0 | 18,676.3 | 48.0 |
| 4. | Forestry and Range | 14,306.0 | 5,004.3 | 35.0 |
| 5. | Fisheries | — | 4,450.0 | — |
| 6. | Water Resources | 119,501.0 | 105,263.6 | 96.6 |
| 7. | Mining | 17,525.5 | 19,364.7 | 110.5 |
| 8. | Industry | 87,795.0 | 78,167.6 | 89.0 |
| 9. | Electricity and Power | 23,533.8 | 19,940.0 | 84.8 |
| 10. | Transport & Communication | 353,060.0 | 190,882.2 | 54.1 |
| 11. | Education | 48,595.4 | 29,226.4 | 60.1 |
| 12. | Health | 71,151.0 | 33,458.0 | 47.0 |
| 13. | Housing | 11,575.9 | 2,399.2 | 20.7 |
| 14. | Social Welfare | 5,293.0 | 3,268.0 | 61.7 |
| 15. | Labour and Training | 11,651.5 | 7,865.2 | 67.5 |
| 16. | Statistics and Cartography | 8,439.0 | 1,846.3 | 21.9 |
| 17. | Tourism | 13,500.0 | 20,190.0 | 149.6 |
| 18. | Information | 8,010.0 | 1,100.0 | 13.7 |
|  | **ALL** | **999,943.0** | **656,624.5** | **65.7** |

(The expenditure during 1973 used in this table are preliminary estimates).

## II. OBJECTIVES AND STRATEGY OF THE DEVELOPMENT PROGRAMME (1974-1978)

In an attempt to achieve the long term objectives which are to raise the standard of living of the people to the highest level, to provide opportunities for gainful employment to all labour force, to eradicate all forms of exploitation and to create a society based on the principles of social justice and individual freedom, the long-term strategy of development is framed on :-

a) Maximising resource utilisation in the production of both commodities and services and ensuring continued growth,

b) Creating conditions where the national product is distributed equitably among the people,

c) Decentralising socio-political adminstration of the country in the Regions and Districts to enable socio-economic development in the country to take place in regionally balanced manner.

d) Organising economic activities on a basis where the means of production are owned and operated by and in the interest of society as a whole and also through that process participate as many people as possible in decisions regarding investment, production, employment and income distribution,

e) Mobilising and utilising internal resources including the labour force to the maximum. Revolutionary orientation and self-help activities will therefore be the major instruments for speeding up socio-economic development of the country. This will eliminate the heavy dependence of the country on external assistance in development efforts in as short a time as possible,

f) Creating cooperative movement in line with the socio-economic requirements and political philosophy of the country. Cooperative societies will be established in agriculture, livestock, fisheries and other productive service sectors of the economy.

The strategy of the Development Programme 1974-1978 to achieve the long term objectives is being discussed for each of the sectors in its appropriate place. However this part of the discussion deals with the general framework. The development strategy in the commodity producing sectors to maximise production dictates that existing projects are examined carefully to see whether any intensification of activities through better management, technical improvement, strengthening of marketing organisation etc. can be introduced. Simultaneously, it will also consist of a vigorous policy of establishing new capacity and full utilisation of existing capacity. Such strategy will be used in all commodity producing sectors but it is more particularly and quickly applicable to the industrial sector.

The basic structure of economic organisation will be that of cooperatives supported by the other industrial arrangements, in specific cases, where cooperative organisation is not feasible. By and large, the larger production units will as far as possible be in the public sector while the medium and small scale units in terms of employment potential will be organised on a cooperative or individual basis. The long term objective of development visualises a role for the private sector and for foreign investment in Somalia. It visualises an increasing role for such investment in specified sectors, consistent with the socio-economic objectives of planned development of Somalia. It will be the objective of the Government that the primary producing sectors are wholly reserved for development either by Government or by local private capital. The tertiary sector will be dominated by the Government, while parts of the secondary sectors, especially manufacturing industries, will need the assistance of foreign capital both on a government to government basis as well as direct private capital investment for maximum development.

The strategy emphasizes maximum priority to the sectors of agriculture, livestock, forestry and fisheries since these primary producing sectors are the key to economic development.

## AGRICULTURE :

Self-sufficiency in sorghum, vegetables, maize and edible oil and increased production of rice, wheat, cotton, grapefruits will be a major objective of the Programme. In general the strategy for agriculture will be one of creating food self-sufficiency as quickly as possible and producing surpluses which could be either exported or which can support dependent projects in livestock and industrial sectors. The strategy transforming the traditional agricutural sector into a modern sector will be pursued with vigour during the Programme period through the encouragement of the formation of cooperatives among the cultivators and intensified application of extension services and credit. This means better farm planning and more economical organisation of production based on improved ideas of cropping pattern and crop husbandry. Agriculture strategy will also emphasises the creation of new State Farms in order to bring under cultivation new land in various parts of the country. The production programme needs the support of intensified research programme in both agronomy and agricultural economics in addition to work in the field of plant protection. The Development Programme period will therefore be used to strengthen such services.

## LIVESTOCK:

The development of the livestock sector is very crucial to the economic development of Somalia. The major outline of the livestock development programme are already evident in the Development Programme 1971-1973 and the Five Year Programme will intensify and give whatever support is necessary for increasing the ability of this sector to develop fast. The Programme gives great importance to projects for increasing animal production both, quantitatively and qualitatively and for more efficient marketing of animal products. The Programme will make an effort in coordinating livestock and agricultural development projects in order to integrate wherever possible the two activities at the production stage in the rural areas. The basic aim of the Programme is to change the tradition ridden mode of production of livestock and to transform it to a modern sector based on scientific production and management.

Range management continues to be of very vital importance to any rational programme of livestock and agriculture development. Therefore the Programme seeks to intensify the activities of projects directed to range conservation and management.

Water spreading is also crucial to the development of both livestock and agriculture and therefore the strategy consists of projects which will rationally distribute watering points with the aims of balancing land conservation and maximum production of livestock and agriculture. Research and extension work in the field of livestock development is of basic importance and therefore the strategy takes into account the central role of these actions.

Animal health programme have been receiving attention in development strategy during the last decade. Such programmes being crucial to the prosperity of the livestock sector, the new Development Programme will emphasize specific programmes of disease control and veterinary work closely integrated with projects for production, processing and marketing of animals. This action will be undertaken parallelly with expanding animal health programmes which will be implemented on a regular basis by the Animal Health Department of the Ministry of Livestock and the Livestock Development Agency.

## FORESTRY, FISHERIES:

The sectors of forestry and fisheries would also get priority in development effort. More specifically, the Programme period will be used to implement development projects in the field of fisheries following up on the results of the surveys of fishery potential of Somalia. The fishery projects are crucial to the efficient performance of the fish processing industry. In the light of the enlarged pressure on livestock production for export, the development of fisheries while increasing the country's potential for export will also supplement the nutritional requirements of the people. Along with the projects for large scale fishing operations, the development strategy will emphasis projects which will assist increases in productivity and incomes of the fishermen in Somalia. Such projects will be oriented towards assisting the fishermen in organising production and marketing cooperatives through which technological improvements will be introduced by providing better fishing boats, fishing gear, and the requirements for wider distribution of fish in the country.

## INDUSTRY:

The objective of the Programme is to establish a strong industrial base that is commensurate with the resources of the country. The existing structure of industrial establishment is biased towards the consumer goods industry. The development of such industries will still continue but more emphasis will be put on the development of intermediate and capital goods industries. The building materials industry will receive immediate attention because of its strategic importance and availability of certain basic raw materials. Establishing of agro-industries for export and for import substitution will be intensified.

The Programme period will be used to intensify surveys and studies of the industrial potential of Somalia in order to identify and establish as many industries as possible. Industrial development will be intensified through programmes of extension work to small scale, cottage and medium scale industries which will be largely in the private sector, management services to the existing large establishments which are mostly in the public sector and financial support for industrial development in the country.

## EDUCATION AND HEALTH:

The strategy for development in the social services sectors, education and health is being framed to bring these services on a widening scale to the majority of the population, especially people in the pastoral-nomadic domain.

Educational strategy is based on the following major considerations:-

a) To bring literacy to nearly 90% of the adults during the Programme period;

b) To create facilities for giving education to all who seek, it;

c) To convert traditional methods into functional literacy;

d) To change the content of education in all levels from the colonial set up by gearing it to the basic social and economic requirements of the country;

e) To introduce basic modifications and enlarge technical education, and

f) To expand the university facilities to the maximum.

The strategy will also provide for deeper analysis of the manpower problems in the country in relation to development requirements and will maintain a balanced approach to general and technical education at various levels of proficiency from primary school to the university level.

Manpower planning shall be intensified and correlated with educational programme.

The health services in the country remain limited in coverage and scope. The Five Year Programme will therefore intensify efforts which have already been started during the earlier period to emphasise and intensify preventive medical care and enlarge curative services as widely as possible. As in the case of education, there is need to evolve organisational arrangements to cater for the health needs of the pastoral-nomadic community and the Programme period will evolve a system suitable to the conditions of Somalia.

The provision of essential medicines to the community for both human and animal production is of very great importance. While some of the medicines are being produced in the country and government has also nationalised the import and distribution of medicines, the Programme provides for pjojects which will strengthen this trend and make Somalia progressively more and more self-sufficient in its requirements of specific medicines, drugs etc.

## HOUSING:

The Development Programme will give greater attention to the problem of housing shortage, especially in the urban centres and incorporate projects to be implemented by the public sector authorities to help in satisfying at least partially the back-log in demand for housing and providing for a part of the increasing demand. The private sector which has an important opportunity in this field will be assisted to the maximum possible extent to participate in the building trade. Housing construction in the larger towns will be coordinated with town-planning activities. Some attention will be given to initiate a progamme of rural housing through self-help and cooperative action.

## TRANSPORT AND COMMUNICATION:

Development planning in the country till now has been giving high priority to the communication and transport requirements. While the new programme gives greater emphasis to livestock, agriculture, fisheries, education and industrial sector, the importance of the development of communication and transport to the maximum extent possible still remains of great concern to the development planners. The Development Programme therefore incorporates projects which continue the trend of strengthening of the communication and transport facilities and aims at closing some of the essential gaps in the network in the country. Such a network will consist of both major projects and small projects like feeder roads etc. Emphasis will be made on developing roads network capable of connecting major consumption and production centres of the country and which will open up potential areas for development. Airports will be improved to facilitate the movement of goods and services and telecommunication services will be developed.

## OTHER SECTORS:

Creation of additional employment to the maximum extent possible will remain a central concern of the Development Programme in order to meet the problems of unemployment which is common to most of the developing countries. Though the potential resources in land is large in Somalia, this does not guarantee employment to the increasing labour force. Therefore the Programme incorporates projects with a perspective on the problems of unemployment and underemployment. The manpower surveys and studies which are part of the development programme will assist in specifying such projects.

The Revolutionary Government has taken on hand a number of policy and administrative measures to maintain stable price levels of essential commodities both locally produced and imported. This strategy will continue during the Programme period. Continuous studies will be made to maintain a stable prices structure in the country to minimise inflationary impact of development expenditure as well as other factors which put pressure on the prices structure. This will enable government to follow a policy of stable prices which will assist production incentives as well as maintain reasonable stability in the cost of living for the majority of the people. This strategy nevertheless is tempered by the dependence on foreign markets, which involvs import of inflationary pressures.

Over the past years efforts have been made to coordinate the implementation of development programmes with the national budget in the form of annual plans. Since there is need for making this coordination more effective to increase efficiency in project implementation, one of the strategies will be to make plan-budget coordination and annual planning as effective as possible. The greatest impact of rationalising financial administration will be on project activities in the public sector. The activities in the private sector will continue to be the concern of the Government and fiscal and monetary policies will be used during the Programme period to maximise development efforts in this sector.

Evaluation of the results of development activities in the country shows that one of the major bottlenecks to effective implementation of projects is the weakness in the administrative organisation of the country, both at the Centre and in the Regions and Districts. Government has been giving its attention to this problem for some years and the Development Programme period will continue to implement measures to improve the administrative machinery through re-organisation, introduction of modern methods of administration, training of administrative personnel and strengthening of the supply base through manpower planning and training programmes. Measures to strengthen coordination among the Central, Regional and District administration in mobilising resources and implementation of projects will be undertaken.

The Development Programme period will initiate large scale activity in reorienting the economy towards a strategy based on developing the country through multi-faced rural development. The decentralisation of administration, organisation of cooperatives, intensification of self-help activities and political orientation of the people towards socialism by organising action at the local level are some of the devices which will assist economic reorientation.

## III. FINANCING AND IMPLEMENTATION OF THE PROGRAMME

The Development Programme envisages an investment of So. Shs. 3.863 million. The distribution of this investment among the various social and economic sectors of the economy is given below :-

| Sl. No. | SECTOR | Investment in (000) So. Shs. | % of the total |
|---|---|---|---|
| (1) | (2) | (3) | (4) |
| 1. | Livestock | 162,087 | 4.2 |
| 2. | Agriculture | 1,124,506 | 29.1 |
| 3. | Forestry and Ranges | 51,153 | 1.3 |
| 4. | Fisheries | 77,990 | 2.0 |
| 5. | Water Resources | 139,552 | 3.6 |
| 6. | Mining | 45,683 | 1.2 |
| 7. | Electricity and Power | 136,540 | 3.5 |
| 8. | Industry | 588,257 | 15.2 |
| 9. | Transport and Communicatoin | 944,697 | 24.5 |
| 10. | Education | 191,065 | 4.9 |
| 11. | Health | 77,721 | 2.0 |
| 12. | Housing | 156,982 | 4.1 |
| 13. | Labour | 11,319 | 0.3 |
| 14. | Statistic and Cartography | 106,099 | 2.8 |
| 15. | Tourism | 12,590 | 0.3 |
| 16. | Information | 37,116 | 1.0 |
|  | **TOTAL** | **3,863,357** | **100.0** |

The programme allocation gives 40.2% to primary producing sectors of the economy (livestock, agriculture, fishseries, forestry and ranges, mining and water resources); 11.3% to the social sectors (education, health, housing and labour); 18.7% to industry and electricity and power; 24.5% to transport and communication and 5.3% to the rest of the sectors.

The large investment to be made in transport and communication is mainly due to the large spillover which has to be continued and the initiation of a few vital conststruction works essential to complete the roads, transport and communication networks. These investments, while not directly productive, assist in the exploitation of the resources of the country and therefore speed up development.

The primary producing sectors, specially agriculture are given large emphasis. Industry receives the due attention it deserves. And the social sectors, education and housing in particular are given prominence.

The pattern of financing the sectoral development is shown below:-

| SECTOR (1) | Internal in '000' So.Shs. (2) | % of Secor Allocation (3) | Exernal in '000' So.Shs. (4) | % of secor Allocation (5) |
|---|---|---|---|---|
| Livestock | 34.809 | 21.48 | 127.278 | 78.52 |
| Agriculture | 394.443 | 35.4 | 279.063 | 64.9 |
| Forestry and Ranges | 29.401 | 57.65 | 21.753 | 42.52 |
| Fisheries | 59.000 | 75.37 | 18.990 | 24.35 |
| Water Resources | 93.488 | 66.99 | 46.064 | 33.01 |
| Mining | 34.408 | 75.3 | 11.280 | 24.69 |
| Electricity and Power | 62.130 | 45.50 | 74.410 | 54.50 |
| Industry | 210.367 | 35.76 | 377.890 | 64.24 |
| Transport and Communication | 118.219 | 12.51 | 826.476 | 87.46 |
| Education | 58.964 | 30.86 | 123.101 | 69.14 |
| Health | 23.851 | 30.69 | 53.870 | 69.31 |
| Housing | 96.632 | 61.56 | 60.350 | 38.44 |
| Labour | 5.375 | 47.53 | 5.939 | 52.47 |
| Statistics and Cartography | 5.902 | 5.56 | 100.197 | 94.44 |
| Tourism | 12.590 | 100.00 | — | — |
| Information | 19.812 | 53.40 | 17.303 | 46.60 |
| **TOTAL** | **1.260.393** |  | **2.602.964** |  |

## ANNUAL PHASING OF THE TOTAL INVESTMENT

(In '000' So. Shs.)

| SECTOR<br>(1) | 1974-1978<br>(2) | 1974<br>(3) | 1975<br>(4) | 1976<br>(5) | 1977<br>(6) | 1978<br>(7) |
|---|---|---|---|---|---|---|
| 1. Livestock | 162.084 | 48.788 | 48.498 | 29.628 | 22.158 | 13.015 |
| 2. Agriculture | 1.124.506 | 171.002 | 263.071 | 262.239 | 229.608 | 198.586 |
| 3. Forestry | 51.153 | 14.429 | 15.218 | 9.805 | 7.221 | 4.480 |
| 4. Fisheries | 77.990 | 10.630 | 19.930 | 21.230 | 13.200 | 13.000 |
| 5. Water Resources | 139.552 | 21.571 | 41.256 | 30.500 | 25.756 | 20.469 |
| 6. Mining | 45.683 | 12.483 | 11.200 | 7.900 | 7.100 | 7.000 |
| 7. Electricity | 136.540 | 36.707 | 31.120 | 29.656 | 26.325 | 12.732 |
| 8. Industry | 588.257 | 107.047 | 144.314 | 118.650 | 112.150 | 106.100 |
| 9. Transport | 944.697 | 280.482 | 189.096 | 205.629 | 161.276 | 108.214 |
| 10. ~~Industry~~ Education | 191.065 | 55.054 | 52.096 | 40.598 | 24.463 | 18.853 |
| 11. Health | 77.721 | 16.135 | 26.867 | 16.380 | 16.263 | 2.076 |
| 13. Housing | 156.982 | 21.160 | 26.190 | 31.455 | 36.319 | 41.858 |
| 13. Labour | 11.319 | 3.775 | 3.602 | 3.143 | .499 | .300 |
| 14. Statistics | 106.099 | 29.904 | 31.643 | 23.192 | 19.602 | 1.759 |
| 15. Tourism | 12.590 | 3.000 | 3.200 | 2.960 | 2.170 | 1.260 |
| 16. Information | 37.116 | 22.686 | 8.342 | 6.088 | — | — |
| **TOTAL** | **3.863.357** | **854.849** | **915.643** | **839.053** | **704.110** | **549.702** |

The financial resources available to the 1974-1978 Development Programme comprise government savings, the excess reserves of the Pension and Gratuity Funds, the investment funds of the Development Bank and Loans obtainable from internal and external sources.

Government savings represent current surpluses of the State Budget which now includes both the central government budget and the budgets of the local councils. Allowing for the repayment of maturing debts, it has been estimated that a total sum of So. Shs. 808.100 million can be obtained from this source for financing investment projects.

The Pension and Gratuity Funds are extra-budgetary funds established in the Ministry of Finance for retiring civil servants. Such funds will in future be enlarged to include also the contribution of the employees of the local councils, public agencies and private companies. The Funds have not so far been utilised for investment purposes but preliminary studies undertaken in this respect point out that, taking into account the expected enlargement, investible funds of not less than So. Shs. 65.000 million will be available in the next five years. Autonomous Agencies will raise So. Shs. 55.192 million.

In financing the 1974-1978 Development Programme the banking system is expected to play an important role. Apart from the financial support that the commercial banks will extend to the public agencies in performing their ordinary functions and in executing their development programme, the Development Bank, in particular, is expected to contribute directly the fniancing of the projects included in the Programme. It is estimated that in the five-year Programme period, the Bank's total investment funds will reach So. Shs. 172.773 which will flow into it as capital subscriptions, repayment of loans and new borrowings.

The financial resources obtainable from the above mentioned sources amount to So. Shs. 1.101.06 million. Additional resources can be expected to be obtained by borrowing, within the permissible limits, from the Somali National Bank. This is now estimated at So. Shs. 159.300 million. Moreover, the government intends to seek assistance (loans and grans) from friendly countries and international organisations in order not only to fulfill its financial requirements in respect to the Programme but also not to break down the existing balance of payment equilibrium in consequence of the huge demand on foreign exchange which the expenditure on the Programme will necessarily develop.

The loans and grants from friendly countries and international organisations will amount to So. Shs. 2,863 million. In summary, the financing of the Programme is as follows :-

## SOURCES OF FINANCE

| SOURCE | Amount (in 000 So. Sh.) | % of total |
|---|---|---|
| A. Internal | 1.260.393 | 32.6 |
| i) Budget | (808.100) | 21.0 |
| ii) Somali Development Bank | (172.771) | 4.4 |
| iii) Autonomous Agencies | (120.192) | 3.1 |
| iv) Internal Borrowing | (159.330) | 4.1 |
| B. External | 2.602.964 | 67.4 |
| **General Total** | **3.863.357** | **100.0** |

## IMPLEMENTATION

The Development Programme sets basic and general objectives and strategies for social and economic development of the country. It attempts to concretise these objectives with specific projects, programmes and policies. The successful implementation of these projects and policies is the responsibility of the central authorities, local governments, financial institutions, autonomous agencies and the public at large. The programme calls for a total and complete commitment to its fulfilment. Development is total and cannot be carried out with inadequate machinery or lack of enthusiasm and determined effort on the part of all institutions and individuals.

The programme calls for a high degree of mobilisation of resources in the country. It foresees fundamental changes in the nation's capacity to generate investible surplus by the central government, local governments, and autonomous agencies. The programme is purposely ambitious on this score in order to tap to the maximum the resources and creative potential of the people for development. The mobilisation of resources is in line with the declared policy of self-reliance and internal generation of resources for social and economic development. Much depends on the people as a whole in the reconstruction of the economy through self-help and through cooperative spirit. The basic changes sought in restructuring the national economy will have to come through the basic sectors of agriculture, livestock and fisheries. These sectors are still in the hands of the private sector and every effort will be made to forge the total commitment of the peasantry, nomads and fishermen to pooling of resources for national development through cooperative societies. The cooperative movement will constitute the base for dynamic and vigorous development of these sectors.

While local resources will be tapped to the full extent possible, the national development need not necessarily be restrained to the available internal resources. There are both finance and real resources gaps which friendly countries and multi-lateral organisations are called upon to bridge. These countries and institutions have moral obligations to participate in the development of the country. In order that this participation is meaningful, the transfer of resources has to be adequate in volume, reliable in supply and soft in terms and conditions. It has to be adequate to make fundamental and lasting changes in the economy of developing countries. It has to be reliable in supply in order to create confidence in the regularity of the flow and to enable reliable programming and its terms and conditions should be soft enough to guarantee its repayment. The dependence of Somalia on foreign assistance is temporary and of a short term nature.

The attention of the government will be focused on the development to adequate machinery for implementation of the programme objectives, projects and policies, the establishment of planning units in all economic and social ministries is urgent and immediate. This call was repeatedly made by the previous development programmes, but has not yet been fully implemented. In the few organs where these have been established, such machinery have by and large been ineffective because of poor distribution of work, lack of trained staff and inadequate appreciation of the importance of such machinery. In the Regions and Districts, the difficulty in establishing planning units has been the severe shortage of qualified personnel. The decentralization policies of the Revolutionary Government goes a long way in relaxing this constraint but adequate training and orientation will have to be carried out. The planning unit has two major responsibilities to carry out. In the first instance, it is the organ that initiates new ideas, undertakes preliminary project preparation, and project evaluation. It will be the centre of sectoral statistics, data and information. Secondly the unit will collect and collate information on progress and performance of development projects. They will put up to the Ministry of

Planning and Coordination periodic reports and give regular information on all problems whether of technical or administartive nature that stand in the way of programme target fulfilment.

Consonant with these responsibilities the selection of staff for the units will have to be carefully made and the position of these units in the hierachy of Ministry will be enhanced.

The Planning Commission will play an active role in the synchronization of development activities and in giving proper guidance and direction to the implementing organs. The Ministry of Planning will prepare basic studies for the Commission to take sound and realistic decisions on development problems.

## ANNUAL PLANS:

In order to achieve regular review and assessment of the Development Programme, the preparation of annual implementation plans initiated in 1971-1973 Programme will be strengthened and continued as a fully developed part of the implementation procedure. The annual plans will include analysis of the state of the economy and general policies of the programme. It will cover also detailed sectoral projects and programmes and involve both financial and physical details of projects. It will cover evaluation of project implementation, comparision of planned targets with actual performance and reasons of deviation. Full analysis of the basic problems and bottlenecks faced and curative measures will be fully highlighted.

The private sector investment will be closely followed in annual plans and the full impact of the sector will be elaborated upon. Annual plans aim also to give more details to projects, to introduce changes and modifications to the original documents as situation changes.

It is the responsibility of all ministries, autonomous agencies and the private sector to establish proper mechanism for elaboration of annual plans. As the concept of planning units gets institutionalised, this responsibility will fully devolve on them.

## PEOPLE'S PARTICIPATION

After the October Revolution the masses have responded favourable to the national call for effective participation in national construction through self-help activities. To all the people at all levels and every where in the country, self-help has become an instrument for mass mobilisation and mass orientation for the country's reconstruction on the basis of socialism and self-reliance.

It is of immediate importance to realise that mass mobilisation itself is not enough. The energies and resources expended and the investments made must be effectively used to achieve specific economic and social goals. This is vital for sustained involvement of the masses in development activities.

Projects in the programme will have the first call on the resources of the country and self-help measures will first be directed toward the implementation of the programme projects and policies. Projects selected for self-help should have intimate relations with masses and should contribute to the economic and social welfare of the masses. Cost conciousness in self-help activities will be paramount and strict observance of economy of resources will be practicsed.

## FOREIGN TRADE, BALANCE OF PAYMENTS AND BANKING DEVELOPMENT STRATEGY

A major problem confronting export trade planning in Somalia is the continuing concentration of the trade both in terms of production and markets. The contributions of livestock, banana, meat and meat preparations, fish and fish preparations and hides and skins increased the volume from 74% of the total export in 1967 to 94.5% in 1971. Parallely the two major markets have been Saudi-Arabia and Italy accounting for 72% of the total value of exports in 1971.

Value of exports to Aden have proportionately declined during this period. Even though there have been some increase in export to other Arab countries, export to EEC countries other than Italy were only 3% of the total value. Exports to the socialist countries however recorded some increase from a negligible level in 1967 to 8.1% of the total value in 1971.

The prespective for diversifying export trade during 1974-1978 period is not fully clear yet, mainly due to uncertainties in the pattern of world foreign trade. The continuing inflationary pressures in many countries of the world, the changed situation in the international petroleum market and the fluid monetary policies of the advanced capitalist countries are some of the factors which contribute to these uncertainties. Somalia's export to the markets in Arab countries are however expected to increase in both relative and absolute terms and thereby compensate some of the adverse effects of the planning exports to countries in Europe. The Development Programme 1974-1978 therefore fully takes into account the need for maximising production for export especially in the sectors of livestock and agriculture. The Programme has proposed the establishment of agro-industries to maximise value added in production in Somalia.

Somalia's balance of trade has continued to remain adverse as a result of it remaining a net importer, mainly of consumer goods. In 1969, 1970 and 1971, in terms of import, the export trade could finance only 62.7%, 69.5% and 55.5% of the import bill. This crucial situation has been taken into account in formulating the Development Programme and policies and projects are elaborated throughout the Programme for increasing the country's capacity to substitute imports as much as possible. There is an immediate revelance to this policy due to the fact that the country has potential for increase of agricultural production to replace import of commodities like, rice, wheat, sugar, edible oil, dates, canned tomato and other fruits and non-alcholic beverages to site a few examples. Parallel to increased production of agricultural crops, there is also scope for more import substitution of industrial products. The government therefore has emphasised the need for establishing as many industrial establishments as possible especially in the small scale sector for the substitution of import of these products. Government recognizses the role of the private sector in stimulating industrial growth of Somalia in order to make the country as quickly as possible self-sufficient in as many items of consumer goods within the shortest time feasible. Fiscal and monetary policy will be framed so as to encourage export promotion and import substitution.

Till the present time, there has not been sufficient trade reciprocity from some of the countries from which Somalia has been importing goods and services. While in the long run, multi-lateral trade can conceptually solve the problems of imbalances in foreign trade among particular countries, in practical terms trade reciprocity is of vital importance especially to developing countries if economic development is to take place. On the basis of this presumption, government have been trying and will continue to try to encourage trade with those countries where reciprocity is evident. Additionally, the government will continue the policy of import of marketable commodities from aid giving countries in order to finance local costs of development while at the same time instituting bilateral trade agreements with other trading parties. In the field of invisible trade, the government visualises increased devolopment in road, sea and air transport so that payments made to foreign countries for these services are minimised. Parallely, government has also taken steps to increase the scope of operation of the National Insurance Company and has arranged for insurance and re-insurance facilities. The establishment of a national shipping line and increased coverage of the Somali Airlines will enhance the capacity of the country to save and earn invisible earnings.

Government during the Programme period will make arrangements for controlling and rationalising the remittances the country receives from Somalis working abroad while endeavouring to stamp out smuggling and black-marketing of courrencies.

A system of budgeting foreign-exchange and balance of payments for the country will be established as soon as possible in order to integrate the national development plan with a foreign exchange budget and the national budget.

Since the nationalisation of commercial banks in Somalia, it has been possible for the government to follow a more rational banking policy directed towards the needs of a developing economy. The generation of credit has bacome more purposive in direction and the Development Programme period 1974-1978 ensure that credit will be directed more towards helping the common man in increasing his productivity along with development of the nation as a whole. On the other hand, the banking policies will also be directed towards an overall programme of mobilising savings in the country to the maximum in order to increase the level of investment and productivity in the economy. Special significance will be given to the operation of development banking for stimulating economic growth through well-planned and directed investment decisions. This will be particularly crucial in the field of industry as well as for cooperative organisation for enterprises in the various sectors of the economy. The Development Programme period will be utilised to establish a financing structure for cooperatives in the country so that even the cooperative which are in the remote areas in the country will be assisted effectively through a credit programme. The overall banking and monetary policies in the country will be directed towards maintaining maximum employment and price stability so that sustained economic development could be feasible. It is however recognised that the influence of the international monetary policies as well as commodity prices will have their repercussion on Somalia. Particular policy and programmes will be laid down to minimise the adverse effects of international economic instability from influencing the economy of Somalia too much.

# SECTION B:

# SECTORAL PROGRAMMES

## I. Livestock and Related Activities

## A. Livestock

### Objectives:

The long-term objectives on which the objectives of the Five-Year Development Programme are based have been envisaged in the first Five-Year plan of Somalia (1963-1967) and restated in the two subsequent Development Programmes (1968-1970) and (1971-1973). While re-stating these objectives, some up-dating of priorities has been made to suit the changing political, economical and physical conditions in the country. The long term objectives are therefore re-stated as follows :-

1. Rational development of animal production for meeting the growing local demand for meat and meat products and increasing the export of meat - frozen, chilled or canned.
2. Disease control for the improvement of the quality and numbers of livestock as well as strengthening research facilities for identification, diagnosis and eventual control of animal diseases.
3. Creation of research institutions for the overall improvement of the quality of the livestock so that with limited numbers, the capacity for meat and milk production can be increased.
4. Consolidation of the traditional markets for livestock and livestock products as well as development of new markets.
5. Transformation of the nomadic way of life in order to improve animal production and the quality of their life into a more secure and productive one.

Within the frame work of these long-term objectives, the objectives of the Development Programme 1974-1978 are as follows :-

1. Introduce the second stage of livestock development through qualitative changes.
2. Improve the rate of off-take from the national heard both for export and local consumption.

3. Develop facilities for finishing and fattening cattle for more carcass weight and better quality meat.

4. Experiment in better selective and cross-breeding to improve the potentialities for meat, milk and wool production, and establish an organisation for extending to the pastoralists the positive results of these experiments.

5. Continue with the intensification programme for animal health which was initiated in the preceding programme (1971-1973) and establish disease free zones in the vicinity of the major points of processing and export.

6. Strengthen the existing institutions and create new ones for training personnel at all levels required for the implementation of the projects in the plan.

7. Develop extension programmes for strengthening the field services and the propagation of modern technology into the rural areas.

8. Rationalise the marketing system and explore ways and means of increasing the returns from export of livestock and livestock products.

## STRATEGY OF DEMELOPMENT

The First Five-Year Plan as well as the two Development Programmes which followed largely concentrated on the problems on intensification of animal health and the organisation of livestock marketing. This concentratin led to relative negleet of other aspects of development of the sector. The emphasis on health and marketing alone was based on the assumption which was somewhat relevant at that time, that there was no problem regarding the number of animals which could be utilised. Therefore, the problems were only to minimise the losses incurred as a result of animal diseases and to improve the marketing processes both internal as well as external. On this assumption, therefore, the fields of livestock production and renewable resources or range and forestry received little attention. It was only in the Development Programme 1971-1973 that an awareness of these other aspects could be detected when a survey of the ecological potentialities of the ranges in the Northern Regions was implemented as part of a major programme of range development and management.

Over the past decade, relatively speaking, considerable progress has been made in the field of animal health. Even more has been accomplished in livestock marketing to the extent that export of livestock and livestock products accounted for nearly 70% of the total exports during 1972. This period has also shown that the assumption of unlimited supply of animals cannot be substantiated. It is therefore assumed that the strategy for development for this important sector is revised as a result of changing development needs. The new strategy is therefore based on the realisation that the control of animal health alone cannot bring about the necessary improvements in the quality of the livestock.

Introduction of modern techniques of animal production and the management of rangelands, which have deteriorated during the past years, are equally important factors. The importance of the enviornmental conditions has been an area which was totally over-looked in the past. Apart from the biological characteristics of the animals, the nomadic way of rearing animals directly affects their productivity in terms of milk and meat. It is therefore, imperative that changes are introduced into the methods of animal rearing in order to expedite the development of the sector.

For all these reasons, the present strategy for the sector will put a major emphasis on improvement of livestock production. For this purpose, it will be necessary to introduce a concept of comprehensive development farms in the various ecological zones of the country. The main purpose of these farms will be to experiment with modern techniques of cross-breeding and selective breeding for livestock improvement and treatment against diseases and by experimenting and providing better system which will improve the potentialities of the animals for meat, milk, wool and furs production. At the same time, the farms will also carry on a programme of fattening animals for export as well as for sale of animals and animal by-products locally as a secondary measure which will help to make the farms self-financing entities. The strategy therefore preferes programmes combining research and production to purely research ones. To enhance production as well as export potentialities, the strategy visualises the operation of feed-lots for finishing of livestock, especially cattle. In addition, provision will also be made for establishing artifical insemination centres which will assist in upgrading the quality of local animals.

A national programme for poultry production in the urban areas, in the first instance, will be undertaken for meeting the growing demand for protein food both locally and in the international markets.

In the field of animal health, the strategy will fill gaps in the existing disease control programmes. Major emphasis will be put on strengthening the research and diagnostic facilities in order to identify and eventually control the major livestock disease. Within the period of the pragramme, a central laboratory in Mogadishu as well as regional laboratories in all the major livestock areas will be established. In this context, the programme includes a project for local production of drugs, all of which are now being imported at a very high cost. To start with, mass consumption drugs like acracides will be produced locally. This strategy will give greater meaning to the declared policy of the government of giving drugs without cost to livestock owners. At the current prices of these imported drugs the amount which can be given to the public without cost will be limited and this could naturally dampen the effect of this revolutionary policy. The number of vaccines produced locally will also need to be increased for prevention and control of the major animal diseases. The Serum and Vaccine Institute will be strengthened to produce at least six major vaccines (Anthrax, C.C.B.P., H.S., Anti-rabies, Anti-tetanus and Rinderpest), instead of the three vaccines it presently produces. The important media for the production of vaccines will also be produced locally. In order to minimise the transporation of vaccines over long distances, a limited number of vaccines will be produced at the Hargeisa laboratory. The needs of all the Northern Regions (Bari, Nugal, Sanag, Tug-dheer, N. West Region and possibly Mudug and Galgudud) for vaccines could be met from the Hargeisa centre.

Quarantines, check points and disease free zones are also important strategy elements in order to control animal diseases and thereby enhance the competitiveness of Somalia livestock and meat in international markets. The re-organisation of the veterinary field services is also equally important in this context and the local Government Councils will be directly involved in the strengthening of veterinary services. These councils will be called upon to provide some of these services (for example, dip facilities) directly to the livestock-owners. The Revolutionary Government has already decided that Local Government will be solely responsible for the distribution and sale of specified mass-consumed drugs.

On the marketing side, rationalisation of the internal marketing system will be pursued further. The export of livestock on hoof will be minimised if not totally stopped in prefrence to local processing which is one of the declared policies of industrialisation. Within the period of the programme, meat export will be directed to more lucarative markets.

In order to implement the programmes successfully, two important components of overall strategy will be the intensification of extension services and training. Because of its important role, extension services will be given special emphasis and it is envisaged that a full fledged programme of extension services to the pastoralists will be initiated at two levels. Firstly, the fruit of research in modern techniques of production, for example breeding techniques, artificial insemination etc., will be made available, and secondly a large scale effort will be made to educate the public of all aspects of livestock development through visual aid, mass media and the written word. Efforts will be made in the early stages of the Programme period to prepare teach-your-self books on animal health, animal husbandry and preservation and management of range, forest and wild life. An expanded radio programme on all the aspects of the activities within the sector is also envisaged.

Training of the personnel involved in implementation of the various projects is of fundamental importance. It is therefore, envisaged that during the Pragramme period the existing Animal Health Institute will be strengthened and expanded. Special attention will be given to expanding the curriculum to include subjects like, animal husbandry, hides and skins processing, laboratory techniques etc. so that the institution will conform to the development priorities in the sector. A faculty of animal health and production, teaching a four year course has already been established and the two batches of locally trained university graduates in animal husbandry and health will be available during the Programme period. Additionally the graduates from universities abroad will also be returning during this period.

Besides academic training at various levels, the training programme also visualises a more vigorous in-service training of the non-formally trained staff of the Ministry. Furthermore, in order to meet the growing need for field staff, training at elementary level will be given to the pastoralists (for example 'Guulwadayaal', 'Nabadoono' and 'Xoolo Dhaqato') in the regional, districts and village orientation centres as well as at watering points whenever the opportunity arises. Through this process, the present heavy reliance on the limited staff of the Ministry can be reduced to some extent.

The 1971-1973 Development Programme in the livestock sector consisted of fifteen (15) projects with a total outlay of So. Shs. 59.385 million. At the end of 1973, the expenditure on eleven (11) projects is expected to total So. Shs. 44.218 million. The remaining four projects are accounted for as follows:. The project for the central veterinary research station, poultry farm and the feasibility study on pilot ranges were not implemented while the project for fodder production was transferred to the Agricultural Development Corporation. The total expenditure by the end of the programme period on the eleven projects which were implemented will therefore mean an achievement of 79.2% of the planned outlay.

During the course of the implementation of the Development Programme, five new projects were added to the programme. These are:-

1. 21st October Dairy Farm,
2. Veterinary Collage,
3. Veterinary Drug Trading,
4. Hargeisa-Burao Holding Grounds and,
5. Burao Pickling Plant.

When the expenditure on these five projects is also added to the total expenditure, the actual expenditure during the three years will be So. Shs. 51.067 million. Compared to the original target of So. Shs. 55.85 million, the level of achievement in terms of financial outlay will be 91.5%

Four of the original projects have recorded an achievement above 100%, two between 80-90%, one a little above 70%, two nearly 64% and one less than 40%. In terms of physical targets, however, the echievements have been much greater compared to what the financial statement shows. For example in the case of the project for intensification of animal health, the physical achievement have been more than what has been visualised in the original project. This project during the programme period has laid special stress on building the infrastructure necessary for disease control in the Upper and Lower Juba Regions as swell as in the adjoining areas so that the country will be able to exploit the export potential for frozen beef. The project has also been able to assist in the conduct of mass vaccination against rinderpest and contigious diseases, and establish the regional district and rural veterinary centres for intensifying veterinary work in the selected areas.

While some expenditure has been incurred in the establishment of parasite treatment centres, the project did not reach the planned stage of implementation due to delay in the construction work of the centres. This delay has been due to financial management problems between L.D.A. and the Veterinary Department.

The achievement of the project for Training School for Animal Health Assistants has been more than what was anitcipated due to the extension of the project for technical assistance into a new phase during the Programme period. In terms of physical targets the project maintained the same level of output of personnel with veterinary training while additional facilities were made for training of personnel in forestry and range management.

The increase in outlay in the Hides and Skins Development Project has also been due to extension of technical assistance into a new phase. The project continued to strengthen and achieved the original aims stipulated.

In the field of livestock marketing, the activities of L.D.A. have been partly reflected in the projects for the completion of the Kismayu Holding Ground, construction of a marshalling yard at Kismayu, construction of two holding grounds at Hargeisa and Burao, the establishment of staging points on the routes to Berbera, some developmental work at small ports and the project for purchase, sale and export of livestock. All these projects have recorded satisfactory progress in implementation.

The project for the establishment of a dairy farm to supply milk to the Mogadishu Milk Factory was implemented at the location of the original dairy farm run by the German Technical Assistance Team. While the original project was of moderate size, the new project, namely the 21st October Dairy Farm, is larger and includes the Warmahun Holding Ground as part of it. A stock of 118 experimental animals consisting of frisian, Guerensey and Sahiwal are held at the farm in addition to 892 heads of Somali cattle which are reared in the Warmahun Holding Ground.

The project for the establishment of a veterinary college which will eventually form part of the National University has progressed satisfactorily.

The Veterinary Department has carried on a project for the import and trading of veterinary drugs. This project was originally implemented by L.D.A. but has subsequently been transferred to the Ministry of Livestock.

## PROJECTS

### 1. Intensification of Animal Health

The project for intensification of animal health included in the Development Programme 1971-1973 was confined to the Upper and Lower Juba Regions due to two main reasons. In the first place, resources were not sufficient to expand the activities to other regions and secondly these two regions were on a priority due to the fact that the cattle in the country are concentrated in these two regions and therefore, an export drive for meat should give priority to these areas for disease free zones.

On the basis of the new strategy which is directed at creating disease free zones around Kismayu, which will be the port of export for carcass meat, an integrated project for disease control among cattle in this area is being proposed. This project will consist of more than one component and the project for intensification of animal health discussed here is part of the large project.

Projects of check points, mobile teams and diagnostic laboratories is the minimum requirement for establishsing a disease free zones. In addition to the activities in the disease free zones, it is also essential, if such zones are to be maintained, for veterinary activities to be expanded in the contiguous areas of the zone. The three regions of middle and Lower Shabelli and Hiran are therefore areas which also should receive intensified animal health services if disease free zones are to be effectively operated.

The intensification of animal health project therefore consist of four components. In the first place, there is an element of continuation of the existing projects in the Lower and Upper Juba Regions. Secondly activities will be extended to Hiran and middle and lower Shabelle,, and the Establishment of district and rural centres staffed by veterinaians and veterniary assistants.

These personnel will be involved in disease control work as well as in some limited activities in extension work. The third component of the project will be the establishment of regional diagnostic laboratories in order to identify as quickly as possible incidence of diseases in the country. The project for establishing diagnostic laboratries has been an on-going project in the Development Programme during the past years. However, due to financial constraints, this subproject has not been implemented satisfactorily till now. Therefore the five year Programmes gives high priority to the establishment of regioal diagnostic laboratories as part of the wider programme of disease control work. The fourth component of the project will be the establishment of check posts in suitable regions to check and control the flow of animals in and out of the disease free zone from adjoining areas. Without such check posts, taking into consideration that a large proportion of the animals are in the hands of nomadic herders, any programme of a disease free zone is likely to become infructuous.

The project will be operated throughout the five year period of the Programme and disease control activities will be operated over the whole country with special emphasis on the creation of the disease free zone around Kismayu. Afmadu has become an important point for livestock marketing in the country through the activities of the livestock Development Agency. This critically situated area will be given more importance when the proposed Trans-Juba Project which is also included in this Programme becomes operational. In this project, it is proposed to appoint qualified veterinarians in the Afmadu district as part of the on-going intensification programme. A diagnostic laboratory will also be established in Afmadu to support the on-going activities in that areas.

In order to extend the operation of intensification work to the Lower and middle Shabelli, district centres will be established in Coriole, Merca, Afgoi, Mogadishu, Wende-Wein, Balad, Adan Yaval, Beletwein and Bulo-Burti. While in Mogadishu the regional staff will look after the activities, in the other areas special staff will be posted to supervise the work of the veterinary assistants who will be posted to the selected rural centres in each of the districts.

During the programme period, six regional diagnostic laboratories will be constructed and these laboratories will be staffed by qualified veterinarians. Three of these laboratories will be constructed in 1974 and three in 1975. These laboratories will work in close collaboration with the Central Veterinary Research Laboratory which will be established in Mogadishu.

The disease free zone will be located in the districts of Gelib, Giamama, Kismayu and Afmadu. The zone will include a pre-slaughter quarantine area in which feed-lots or other finishing system will be located. The exsting Holding Ground in Kismayu will be utilised for this purpose. The surrounding disease free zone will admit stock into the areas after a holding period of three months during which all animals will be vaccinated against contagious diseases. The check/treatment quarantine centres which are discussed under a separate project will be the points where the animals will be held before they enter the disease free zone. The protection of the boundary of the disease free zone will be through natural barriers as well as barriers made by bushes and fencing. All the animals moving into and out of the disease free zone will be clearly identified by permanent identification marks and will possess movement permits. Twelve check points will be established, six each in 1974 and 1975 on the cattle routes around the perimeter of the disease free zone. Each such check point will be manned by two veterinary assistants, two veterinary learners and two veterinary guards. These personnel will be supervised by a veterinary doctor who will be touring the disease free zone. and will be incharge also of the control of illegal entry of animals into the zone consisting of the veterinary doctor, one veterinary assistant and one veterinary learner equipped with diagnostic equipment, drugs and vaccines, two mobile teams will be working in each region. The mobile team will also be supplied with the necessary vaccines, drugs and other equipment and will work in close collaboration with other disease control activities in the Ragions.

The total cost of the project during the five year period will be So. Shs. 2.436 million.

## 2. Parasite Treatment Centres

The project envisages the establishment of parasite treatment centres throughout the country as a follow-up action of the project already being implemented in the Development Programme 1971-1973. Parasite treatment centres have been in existance for some time and have been popular in the Northern Regions. In the Southern areas of the country, the facilities have been limited and the present project visualises intensification of activities in order to establish a regular and comprehensive parasitic control services in the whole of Somalia by equipping each district veterinary centre with sufficient equipment and drugs for dipping and spraying and anthelmintic treatment of the animals. The centres will be attached to the veterinary centres and will be equipped with spray pumps for spraying cattle and camels and dipping for sheep and goats and dosing guns for administering anthelmintics to all classes of livestock. Spray races and holding pens will also be contructed in each centre. These centres will act in the long run as district livestock development centres where major activities of animal health, production and the extension work can be implemented for all varieties of animals.

The project will also establish spray races and swim bathes near all water points and markets.

For implementing this project, permanent dips and spray-races will be established in different centres in all the districts. The project will also provide additional equipment to those districts which have some facilities already. The activities of the parasite treatment centres in the districts will be under the charge of the district veterinary assistants who will be supervised by the Regional Veterinary Officers. There will be six mobile teams who will be touring in each of the four of the Northern Regions and in the Lower and Middle Shabelli Regions and in the areas of the disease free zone. These teams will also be used in the prevention and control of contagious diseases of livestock as and when there is an out-break. Each mobile team will be formed with two vehicles for equipments and medicines, under the control of one veterinary assistant and one dip assistant.

Expansion of these activities in the Southern Regions will be implemented fully during the last two years of the programme after additional surveys have been completed on the requirement of these areas for ecto-parasitic treatment.

In terms of physical facilities, while at present there are 20 permanent and 33 portable dips operating in the country, the implementation of the project will add the following facilities:

| | | |
|---|---|---|
| Permanent Dips | — | 30 |
| Portable Dips | — | 29 |
| Spray races permanent | — | 20 |
| — mobile | — | 250 |
| Holding pens | — | 20 |
| Crash races | — | 20 |
| Swim bathes | — | 10 |

The recurrent cost of the project which will continue through the five year period will be So. Shs. 672,000. The capital outlay will be So. Shs. 1.777 million.

## 3. Check-Treatment Quarantine Stations

This project which is complementary to the project for a disease free zone in the Kismayu area is for the establishment of seven stations, two in 1974 one each in 1975-76-77 and two more in 1978. The stations will be established at Afamdu and Dugumu in 1974, Arobohuuou in 1975 after surveying the zone. In 1976 one station will be established in the Shabelli Region and Burao. It is anticipated that these stations will help in disease control work among nearly 2 million cattle. Apart from the control of diseases like anthrax, rinderpest and C.B.P.P., these stations will also be responsible to some extent for the control of trypnosamasis in the inter-rivrine areas.

Each station will cover a fenced area of 5,000 ha. of open grass land and 5,000 ha. of reserved grazing land. Each station will also have three deep bore wells and water supply along with laboratory, stores, spray races and cattle pens. The dispensary facilities will be sufficient to treat as well as take normal control measures against outbreak of diseases. So. Shs. 6,119,395 will be the capital cost of the project and So. Shs. 2.884 million the recurent cost during 1974-1978.

## 4. Rinderpest Control

The original project for rinderpest control which was to last three years from the end of 1969 till the end of 1972 planned to vaccinate the entire cattle population in the country for three successive years with the ultimate aim of eradication of diseases. A review of the work at the end of a two year period convinced that 65% of the cattle in Somalia would be innoculated by the end of the project period and there will be still some work to be completed to achieve the aims of the project. Consequently it was decided that the project will continue for an additional period of three years beignning from 1973 till 1975. Shortfall in the achievement of the project have been mainly due to the difficulties encountered by the vaccination teams to reach all the areas as well as due to the reluctance of livestock owners to bring their cattle into accessible areas. The project which will therefore spill-over into the five year Programme for two years has therefore set the following targets for achievement :-

a) Re-vaccinate the animal calves-crop at least once per year for two successive years.

b) Vaccinate and mark or ear-punch all adult cattle with no evidence of previous vaccination.

c) Keep neighbouring countries informed of any out-break of rinderpest.

d) In case of an out-break, implement the accepted control measures as quickly as possible.

e) Maintain a strict surveillance on the movement of cattle.

f) Provide Adequate legislation for this purpose.

The work during the second phase will be done by 20 mobile vaccination teams which will cover the entire Republic. The project will also be concerned with vaccination against C.B.P.P., anthrax and black-quarter diseases in addition to rinderpest. A joint programme for the control of C.B.P.P. which has already started in West Africa is expected to be introduced in the East African Regions and the additional task of the rinderpest campaign will therefore eventually form the starting point for further joint programmes in disease control in the Region. During 1974-1975, a pilot project will be implemented to formulate an efficient C.B.P.P. control programme. The pilot project will consist of field service to locate the pattern of distribution and spreading of C.B.P.P. in Somalia and assist the Director of Serum and Vaccine Institute in the production of C.B.P.P. freeź-dried vaccine and TC-Rinderpest/Pleuropenumonia vaccine.

The total cost of the project is So. Shs. 3.907.300 during the year 1974-75. A major part of this will be received as an assistance through the OAU joint Programme. The staff required for work are already avaliable and the facilities in the Serum and Vaccine Institute will be fully used for the production of the vaccine required for the campaign work. No cost is therefore shown against the Programme since it will be financed out of the Ordinary Budget.

### 5. Tsetse Fly Control

This project will be in the nature of a pilot project for reclamation of the tsetse infested areas along the Shabelle river. Catching and trapping, bush clearance, burning of vegetation, destruction of big game, regular spraying animals and the bush, aerial spraying, medical treatment of cattle, distribution of sterial male flies are some of the methods used in different countries for tsetse fly eradication. As already indicated, the conclusions regarding the comparative efficiency and related cost of the various methods are still in an experimental stage. Taking into consideration the importance of tsetse control and eradication in Somalia, the pilot project will be operated by a tsetse fly control unit. Several batches of the tsetse habitat between Gul-wein and Bulo Madade will be cleared and suitable blocks of area will be perpared for spraying so that safe watering places for the cattle will be created. To start with, some batches of tsetse infested bush will be cleared and in larger areas parallel clearing of 2 meters wide will be made every ten metres for the convenience of sprayers. The Shabelli river banks at the infested areas will be cleared at the rate of 50 meters in 2 km. on each side and will be sprayed. Bush clearance will be done by the tsetse eradication staff in cooperation with the crash programme volunteers. Spraying will be carried out from January to April each year. Dipping and spraying for cattle with insecticides will also be carried out throughout the area since the fly menace will be reduced to dipped or sprayed animals. The pilot project will be useful in working out the implications of a larger project which is already being planned by the OAU Technical Committee for implementation in various countries in Africa. Somalia intends to utilise this opportunity to participate in the larger programme which will ultimately help in the complete eradication of tsetse infestation in Somalia. The total cost of the project during the five year period will be So. Shs. 317,500.

## 6. Veterinary Research Laboratory

The project aims at the development of the Serum and Vaccine Institute into a veterinary research laboratory on international standards with the aim of producing biologicals in convenient quantities to satisfy the needs of the country and help to stop importation of different vaccines. It also visualises the establishment of a centrally directed veterinary laboratory to fulfill governmet policy for the diagnostic control and eradication of the most important infectious diseases. The project will therefore establish a central laboratory in Mogadishu as well as take over the work of the laboratory in Hargeisa which was started in 1966. The project will in the first instance assist in the production of important virus vaccines such as rinderpest vaccine from tissue culture, the most important bacterial vaccines like C.B.P.P. vaccine and diagnostics such as pullorum, antigen, tuberclin etc. It also will assist in establishing and developing regional and district laboratories and train local staff in the project and abroad. The project will establish workshop facilities for the repair and maintenance of laboratory equipment, and whose services will be extended to the regional and district laboratories as well as veterinary centres, it is anticipated that assistance from multilateral agencies will be forthcoming in the form of experts and equipment for the implementation of the porject.

The project also has provided for training in virology, bacteriology, parasitology tropical veterinary medicine, laboratory technology and instrument technology. The major part of the activities for establishing the laboratory is expected to be completed by the end of 1977.

The total capital cost of the project during the five years will be So. Shs. 7.847 million out of which a sum of So. Shs. 1.160 million is expected the project during 1974-1978 will be So. Shs. 4.883 million to be received as technical assistance. The recurrent cost of the project during 1974-1978 will be So. Shs. 4.883 million of which So. Shs. 2.237 million will be local finance.

## 7. Veterinary Pharmaceutical Project

The Department of Animal Health and Production is already implementing a project for the import and distribution of veterinary drugs. With the recent enactment guaranteeing free vaccine and medicine for livestock throughout the country, the need for strengthening the project for drug trading into a larger project for import and distribution as well as manufacturing of veterinary drugs and medicines is imperative. The veterinary pharmaceutical project is therefore expected to meet the need on both these aspects. During the five year period, the project will concern itself with buildnig eight regional stores, four each 1974 and 1975, in addition to the creation of the other infrastructural requirements for implementing the project for drug distribution. The project also provides So. Shs. 6 million during each of the five years for purchase of drugs for free distribution.

The five year programme period will be utilised to finalise a project for the manufacturing of all essential veterinary drugs and medicines in the country. The organisation required for this will be worked out taking into consideration the already existing ASPIMA, the autonomous organisation responsible for the import and distribution of drugs, which has a project under preparation for manufacturing medicines in the country.

The project will also concern itself with evolving methods of distribution suitable to the nomadic domain. The work of the pharmaceutical project will be closely related to the work of the regional diagnostic laboratories proposed to be established in all the regions during the programme period.

The total cost of the project will be So. Shs. 33.304 million out of which So. Shs. 30 million will be the cost of drugs to be purchased for free distribution. So. Shs. 1.224 million will be the capital cost of the project.

### 8. Training School for Animal Health Assistants

At the present time, the Training School for Animal Health Assistants has a capacity for training one batch of thirty new students every year in a course extending two years. The project has been functioning succesfully but the requirement of the country for trained personnel in veterinary work has been increasing sharply. It has therefore, been proposed that the school will increase its intake from 30 to 150 students. With this new policy, about 600 Animal Health Assistants will be available within the next five years. The expansion of the school which is proposed in the Development Programme 1974-1978 has a major component in building up the size of the campus through the construction of the following additional structures :-

a) Two classrooms of total capacity of 120 students.

b) Library, accommodating 120 students.

c) Reading room of the same size as the library.

d) Two laboratories each accommodating 60 students.

e) Four hostel buildings with accommodation for 96 students in each.

f) one house for the hostel Warden and two other living quarters for Block Teachers.

The technical assistance being received for the training school will continue during 1974 and 1975 in the form of equipment and experts. The capital cost of the project during 1974-1978 will be So. Shs. 4.835 million. The recurring cost component will be So. Shs. 8.157 mililon.

## 9. Trans-Juba Livestock Development Project

The Trans-Juba Livestock Development Project is basically aimed at increasing Somalia's meat exports specifically from the area between the Juba River and the Kenya border in the south. The components of the project consist of the following:

### A) A Marketing Component

1. This will consist of the construction of three permanent cattle markets at Tabda, Maskati and Garisci-Warshan and two small cattle markets to Dolo and Busar.
2. The Development of water supplies, staging points and a ferry in connection with the construction of 1086 km. of stock routes.
3. The purchase of additional vehicles and equipment and increasing the size of marketing teams in the projects areas.
4. Providing adequate funds for the purchase of additional cattle obtained through the operation of the project.
5. The construction and operation of one cattle holding ground with an area of 20,000 ha. near Afmadu.
6. Bush clearing over 12,000 ha. and the development of two water points on the existing holding grounds near Kismayu.

B) The project contains a proposal for the establishment of three production ranches. The work involved in this component will be:-

1. Construction and operation of three natural pasture ranches of 80,000 ha. on which purchased immature cattle can be grown for one year.
2. The design and construction of the irrigation, drainage and road works on a 1,500 ha. farm near Mombasa Island on the Juba river and the development and operation of this farm to produce cattle fodder under irrigation.
3. Construction and operation of fodder storage facilities and feeding yards on the irrigation farm to which cattle can be introduced from the growing out ranches and fattening for a seventy day period for sales, building upto 30,500 heads of cattle per annum.
4. To provide funds for the purchase of the necessary immature cattle for fattening.

C) The disease control component of the project will comprise :-

1. The construction of one cattle veterinary centre at Kismayu, three veterinary centres at Afmadu, Gelib and Giamama and 5 veterinary dispensaries at Garisci-Warshan, Anjuip, Bibi and Raschiambon.
2. Transport equipment and recurring expenditure for additional veterinary staff.

D) The project proposes the establishment of a construction and maintenance unit complete with heavy construction equipment, staff, production and disease control development components. After the construction works are completed in approximately 2 years this unit would be reduced in size and used for maintenance work.

E) The training component consists of proposal for sending two students overseas for a four year degree training in animal production and also provides funds for diploma courses for eight students in similar disciplines.

The project will be organised and administered through a new department known as the Project Development and Training Unit attached to the Livestock Development Agency. The veterinary facilities created by the project would be operated by government through the Department of Animal Health.

The project will have at full project implementation in the 6th year, a total annual output of 81,000 heads. This increase in numbers with the increases in cattle weight would increase meat exports (live animals, canned meat and chilled) by 5,000 tons per annum from the 6th year on-wards.

The project investment period will be four years and the total cost will be 80.350 mill. shillings with a foreign exchange component of 43%. The total project cost includes developmental operating expenses for the first four years estimated at So. Shs. 30.788 million exclusive of technical assistance from abroad.

### 10. Multi-Purpose Cattle Ranch - Gelib

This project which will complement the project for livestock development implemented by the EEC, the Trans-Juba Livestock Development Project and the Agricultural Development Project in the vicinity of the proposed Fanole Dam is basically a marketing project. The Multi-purpose ranch will be located in the holding ground being developed by the EEC, and used to :-

a) test the productive capacity in both milk and meat of the indigenous breed of high potential cattle in the country and to maintain these types in adequate numbers and improve them by selective breeding.

b) fatten to make them suitable for sale through improved feeding management, feeding and health standards in the potentially high price market abroad.

c) improve on the traditional methods of processing milk into ghee by establishing a small factory in the ranch for this purpose.

The project wil start with an initial stock of 3025 heads of cattle purchased from local stock owners. An additional 4100 heads will be purchased during 1974 and 1975. The operation of the ranch from then onwards will be based on the animals produced in the ranch itself and it is expected that from 1976 onwards the project will make a profit.

The project will be located in an area of 1500 ha. on the western bank of the Juba River opposite Gelib town. This area is geographically located within the Shabelli flood plain which can thus be described as shrub and tree steppe and will be an area suitable for ranching. The project will also assist the agricultural communities in the area by supplying milk and ghee and organic fertilizers. The ranch will also serve as a demonstration centre for improved animal husbandry practices as well as production of superior types of animals through selective breeding. This is expected to assist in the ultimate goal of sedentarisation of nomads through settled livestock rearing and agricultural production. The fixed capital outlay of So. Shs. 963,800 on this project will be charged against this project while the EEC establishment will supplement with facilities for buildings, etc. The project will require allocation of operating capital of So. Shs. 3,248,110 during the Five-Year period.

### 11. Immature Cattle Holding, Marketing

The 1971-1973 Programme had included a project for construction of two staging points on the Burao-Berbera road. Subsequently this project was expanded to include two Holding Grounds, one near Hargeisa and the other near Burao. The implementation of this project will spill-over into the five year programme and the construction of the facilities is expected to be completed during 1975. The project area will serve the traditional range lands located in the Borama, Gabilay, Hargeisa, Burao and Buhodle Districts. This area which is one of the highest spots in Somalia between an altitude of 3000 ft. and about 8,000 ft. with its potential for fodder production is at present an arid land due to prolonged over grazing, damaged forests and soil erosion. Water supply is scarce and the cattle owners have to cover vast distances for watering their animals. In these circumstances, it is a practice of the herdsmen to dispose of the immature cattle which form nearly 30% of an average of 70,000 heads which is exported annually from this area. The facilities for transport of cattle to Berbera port is also unsatisfactory and the animals therefore have to travel on foot a distance of between 150-200 miles to reach Berbera port. This leads to high mortality rate and weight losses since water, fodder and shelter along the way is insufficient.

The project aims at stopping the export of immatures by improving market facilities, establishing two holding grounds and producing fodder to hold, fatten and market immature and steers. The project has also a target for the construction of two staging points on the way to the Berbera port. The more important aspects of the project are :-

a) establishment of two small market centres, one in Tugwajaleh and the other in Hahi. The two market centres have been chosen so that they are near the holding grounds and will serve areas of cattle concentration. Each market will consist of an office, rest house, shelter for traders, weigh-bridge and sale-pens.

b) the construction and the operation of two holding grounds, one at Goladay near Hargeisa and the other at Arori near Burao. Each holding ground will be enclosed with perimeter fencing, and fencing for sub-dividing the area between the paddocks. The holding ground will also have roads, bore holes, barkets, cattle dips, housing office and stores. The carrying capacity of the holding ground is estimated at 10,000 heads in each. The immatures will be held for a period of six months or a year. This will help in discouraging the present outflow of such animals into the export market.

c) the establishment of a 1000 ha. farm for the fodder production at Tugwajaleh. The fodder requirement for the two holding grounds is estimated at 60,000 tons of which half will be available by way of natural grasses in the holding ground area itself. In order to provide the remaining 30,000 tons, it is proposed to use approximately 1000 ha. of the Tugwajaleh Crash Programme area where Sudan grass and other fodder will be grown.

d) establishment of two staging points, one in Daregodleh and the other at Bihindole. These staging points will connect the holding grounds to the Berbera port. Each of the staging points will have a bore hole, water supply, sheds for animals and troughs to feed and water the animals.

The capital expenditure on the project during the five year period will be So. Shs. 3.382 million. So. Shs. 6.0 million will also be required as working capital for purchase of animals. The recurrent cost of the project will be So. Shs. 5.381 for the five-year period.

## 12. Feed-lots Project.

The project aims at establishing a feed-lot farm for fattening cattle for export of deboned meat to the high price markets in Europe, North Africa and the Middle East, and therefore increase the quantity of meat exported even without increasing the number of animals slaughtered. This aspect becomes more important due to the fact that there are indirect evidences that Somalia will be reaching a tentative limit to the number of animals exported if additional development projects are not implemented quickly. The feed-lots project will therefore form one part of the more extensive programme of animal production, marketing and export.

The project consists of two components, namely the operation of the feed-lots and the establishment of a sugar-cane plantation. The feed-lots component will be operated on the basis of fattening animals by feeding them derinded cane, top of the cane, meat and the bone meal, urea, salt and other fodder material. A total of 50 feed-lots will be constructed, each with an area of 100 sq. meters and an additional 200 sq. meters of shaded surface. One of the feed-lots will be for the preparation of the arriving cattle which will receive veterinary treatment. The feed-lots section will be provided with a total of 1150 sq. meters of building which will accommodate offices, veterinary laboratories store, three sheds for equipment, machinery and workshops.

The plantation will be provided with irrigation and drainage network with water regulators as well as a farm centre. Water pumping equipment will be installed with a capacity of nearly 400 cumecs. It is anticipated that the average production of sugar cane stalk will be 800-900 quintals per ha.

The project assumes that the feed-lots can produce 28 tons carcass meat per week. With an average intial weight of 200 kgs. per animal, in six months time, the weight is assumed to increase by a minimum of 325 kgs. Out of a total of 9600 cattle which will be fed, a little more than 9,000 cattle are expected to be available for slaughter for export of meat. The remaining animals will be slaughtered for the internal market.

The investment is scheduled to be completed in three years. Two-fifth of the land will be brought under cultivation during the first year, and one-fifth during the third year. The feed-lots operations will therefore begin during the second year when two-fifth of the construction of the feed-lots will be completed. The feed-lots will be wholly completed during the third year by the time the plantation area has been brought under cultivation.

The project provides for machinery and equipment for the operation of the feed-lots as well as for the the plantation. The total capital cost of the project will be So.Shs. 8.504 million. The project will also require a working capital of So. So. 2.4 million and recurrent expenditure of So. Shs. 6,293,400 for the five-year period.

## 13. 21st October Dairy Farm

This is a spill-over project from the 1971-1973 Development Programme. The aim of the project which was to supply as much fresh milk as possible to the Mogadishu Milk Factory, still remains a central one. In addition to this, the project during the five-year programme period aims at the establishment of a centre for breeding pedigree animals in the country through experimental cross-breeding.

At present the farm covers an area of 583 ha. 281 ha. are under irrigation of which 83 ha. has so far have been utilised for fodder production. The fodder production is insufficient considering the needs of the Dairy Farm since the total stock in the farm at present is 1156 heads of which 193 are milking cows. The daily average yield of the cow is only 2 litres of milk and it is in this context that the project is embarking on a scheme for upgrading the animals.

The breeding programme plans to make the local cows with better breed Holstein, Gurensey and Sahiwal bulls. The progeny of these males are expected to yield more milk and more weight. A limited programme is already under operation and has produced 46 heifers and bulls in the first generation. It is expected that the farm will become a centre for mass artificial insemination for animals, a centre which may, as a pilot farm, gradually lead to the introduction of good quality stock of animals throughout the country.

The milk production programme will be put into operation through the purchase of 530 pedigree cows and 45 local cows of high production potential. The cattle to be purchased together with the high-breeds to be re-produced each year, whose maturity is expected to be accelerated through proper feeding and health care, will gradually increase the number of cattle in the farm from the present 1156 heads to nearly 2000 heads. It is anticipated that through cross-breeding and better animal production techniques, the average yield during the programme period will increase to five litres of milk per animal. Any higher yield can be anticipated only beyond the 12th year after the breeding programme has been fully implemented.

The project will also give greater emphasis to the production of fodder and feed concentrates and land will be re-claimed to extend the farm to about 1200-1400 ha. The cultivation programme is phased through the programme period so that additional areas are added throughout the period.

The fattening of cattle will be part and parcel of the project whereby the surplus animals will be fattened with the fodder produced in the farm as well in the Warmahun Holding Ground and sold.

The technical and administrative personnel and the supporting staff are already available and the project provides for construction of 35 living quarters to accommodate the staff of the farm. The total capital cost of the project will be So. Shs. 2.188 mill. The recurrent cost will be So. Shs. 1.508 million for five years.

### 14. Assura Sheep Holding Ground

The Assura Sheep Holding Ground which was established in 1966 is situated at a distance of 280 km. from Burao and 480 km. from Berbera. There are at present 650 heads of sheep including 250 ewes in the farm. Even though the farm has been in operation for some years, it has not been of much significance in the overall programme of livestock development and improvement. In the Five-Year Development Programme, measures will be taken to make the Assura Sheep Farm and Holding Ground into a centre for production, experimentation, breeding and also management of sheep rearing. In this connection, it is relevant to note that the natural climatic conditions, specially the negligible humidity in the air and the abundance of nutritious herbiage, are very favourable for raising the karakul fat-tailed sheep from Tashkent. The project will therefore conduct production expriments on crossing the local black head sheep with the karakul.

The following measures have to be taken during the programme period at the Assura Sheep Holding Ground :-

a) Fence the ranges of the holding ground of approximately 3200 ha. into blocks, so that they could be used by the sheep of the holding ground only. The ranges will be divided into lots of 25 ha. each and use rotational grazing to ease pressure on th range.

b) With the aim of increasing the nutritional value of fodder, sow additional areas with grasses rich in protein.

c) With the aim of accelerating the rotation of the stock and increasing the sheep stock to 20,000 heads by 1980, purchase in 1974 an additional stock of 1000 heads of ewes from the sheep owners.

d) For conducting breeding experiments through crossing of local black head sheep with karakul, purchase 20 heads of rams.

e) Arrange facilities for artificial insemination of sheep in order to enable controlled development of the flock size.

The cost of the project during the five-year period will be So. Shs. 4.489 million. Of this, the recurrent cost will be So. Shs. 2,350,500 during 1974-1978.

### 15. Sheep and Goat Ranch in Erigabo

A sheep and goat ranch is to be established in the Erigabo District where the climatic conditions are suitable for production of wool, beginning from 1978. The project is formulated to take advantage of the potential of the Uzbekistanin fat-tailed coarse Djaidara breed by crossing with the local sheep. The ranch will also demonstrate advantages of settling the nomads in ranching of sheep and goat. The project will eventually have a total of 20,000 heads and goat. In order to provide these animals with fodder, the project will utilise 5200 ha. of pasture land. In addition to the work of improving the pedgree through experimental breeding, the farm will also undertake a programme of fattening of sheep and goats.

At the beginning of 1978, the farm will start buying 1560 sheep and goats from private herd-owners which, will form the basic stock through which the number will eventually increase to nearly 20,000.

The pasture land alloted to the farm will be fenced and sub-divided into 25 ha. blocks for rotational feeding. The project will purchase 1000 ewes, 300 she-goats, 250 rams and 10 billy goats during the beginning of the programme period. The project also requires the construction of production and living quarters, acquisition of agricultural machines and equipment and other vehicles, the setting up of a veterinary station for preventive and curative treatment of the stock and a fully equipped station for artificial insemination.

The production experiment in the ranch will be done with 100-150 ewes of local black head sheep which will be crossed with rams of fat-tailed coarse Djaidara breed to be brought from the Uzbekistanin Republic.

The capital cost of the project during 1978 will be So. Shs. 1,269,920. So. Shs. 605,120 will be the operating expenses during that year.

### 16. Sheep and Goat Ranch in Galkayo District

A sheep and goat ranch is to be established in Galkayo in 1978. The objectives of the project are :-

a) Increasing live-weight of local sheep and goat as well as increasing the production and quality of meat.

b) Stationery breeding of sheep and goat and fattening them during the dry periods with supply of prepared fodder and demonstrating the advantages of a sedentary way of sheep and goat rearing, compared to the nomadic method.

c) Operating the ranch in a commercially viable manner so that by the end of a five year period, the ranch will become economically self-supporting and capable of yielding substantial profits.

The project proposes to keep 5126 heads of sheep and 1075 heads of goat annually for breeding purposes. In addition to this, 5000 rams and bucks will be kept on the ranch for fattening and sale. Each lot of animals will be fattened for a period of six months and the cropping percent is estimated to be 80.

The herd will be purchased from private owners and production will be carried on the basis of selective cross breeding of indigenous animals. To supply the herd with fodder, 1500 ha. of pasture land will be set apart. This area will supply green fodder during the favourabic period of the year and also provide approximately 1300 tons of hay during the dry period of about 150 days.

Beginning from the third year of the starting of the project, it is expected that nearly 6800 heads of sheep and goat can be sold every year.

The project involved investment on limited bush clearing, fencing farm buildings consisting of 24 sheds for the sheep and goat, 15 living quarters, 1 office building, one repair shop and one double drive silo of 1800 cubic meter capacity, purchase of vehicles and other equipment and provision of water supply through two wells and the related constructions. The capital cost of the project in 1978 will be So. Shs. 1.069 million. So. Shs. 638,000 of this will be used for the purchase of sheep and goat for breeding and fattening. The operating cost during 1978 will be So. Shs. 182,400.

## 17. Model Poultry Farms

The poultry which supply eggs to the larger towns in Somalia are not good producers and yield on an average about 40 eggs per year per layer. Eggs are of small size, about 36 gms. compared to the standard weight of 50-56 gms. Pullets are weak and wastage is great. In order to improve the quality of the poultry and to demonstrate methods of keeping and raising chickens and layers, improved breed, for example leggorn, are to be produced in seven modern farms near the towns of Hargeisa, Kismayu, Baidoa, Burao, Belet-wein, Galkayo and Bosasso. Each of the demonstration centres will be stocked with 2,000 layers.

Each modern poultry farm and hatcher will produce about 200,000 egges per year of which 135,000 will be sold, while 65,000 will be incubated for further re-production of poultry in the farm. Each centre will have the capacity for distribution of 60,000 chicks to individuals and cooperatives to encourage scientific poultry production.

The construction of the farms will be phased over the first four years of the programme with two farms established during each of the years.

The capital cost of the project will be So. Shs. 1.050 million and the recurrent cost So. Shs. 3,053,100 during 1974-1978.

### 18. Hides and Skins Improvement Project

The project for Hides and Skins Improvement follows up the project for Hides and Skins and Leather which was included in the Development Programme 1971-1973. The present project will consist of two phases. The first two years will be a joint Government/UNDP project while the three years will be a purely government project. The project for establishment of drying sheds which was part of the original project of the three years Development Programme will be intensified throughout the country by establishing demonstration and purchase centres. The general objectives of the project are the following :

a) Eliminate hot-iron branding of valuable parts of hides and skins.

b) Improve flaying and replace «case-ripping» with open-ripping.

c) Improve standards of washing, fleshing, trimming and presentation.

d) Improve curing by changing the present air-drying methods system to shade suspension drying and introducing improve methods of salt curing of open hides and skins and their subsequent drying on rope lining.

e) Introduce and teach storage methods.

f) Import and distribute insecticides.

g) Introduce and teach better buying methods of hides and skins through proper selection and grading.

h) Establish and operate buying stations.

The organisation which will be established for implementing the project will consist of :-

a) A field hides and skins extension service,

b) A number of centres which will serve as base for extension services in the regions, demonstration centres and purchasing points to obtain supplies of improved material for meeting the input requirement of the Government owned cannery.

The success of the project will also depend to a large extent on legislation which will be required to regulate and control through licencing system the work of flayers, curers and traders.

Operationally, the country will be divided into four zones . The first zone will include Hargeisa and Togdheer, the second zone Galkayo and Nugal regions, the third zone Hiran, the Upper and Lower Shabelli regions, and the fourth zone will be composed of the Upper and Lower Juba regions.

Each field station will be managed by a Senior Hides and Skins Improvement Officer. 62 demonstrational and purchasing centres will be established under the field stations. There will be one demonstrational and purchasing centre in each of the country's municipal towns. Three of these centres have already been constructed and the remaining centres will be constructed according to the following schedule :-

1974 — 16
1975 — 16
1976 — 13
1977 — 11
1978 — 3

This phasing has been established since speeding of construction of the centres could be counter productive since as each centre is completed it must be brought into productive operation as a purchasing demonstrational centre and this calls for demonstration and on-the-job training of the staff who are to run each unit. After the end of the five year period of the programme, the field hides and skins project would continue on a permanent basis assisting both processing and marketing of hides and skins while maintaining improved technical standards.

During the first two years phase of the project, the cooperation of the UNDP will be mainly through assistance for obtaining those inputs requiring foreign capital expenditure as well as expertise. This part of the project will specifically have the following objectives :-

i) Design premises suitable for each municipal town where improved techniques for processing hides and skins will be demonstrated and put into practice both by Government personnel (of the Hides and Skins Extension Service and others) and private persons.

ii) In conjection with Government, select appropriate sites in each of the municipal towns and, to the maximum extent possible, provide advice in the construction of these centres.

iii) Demonstrate appropiate techniques specifically adoptable in each Region with particular reference to improved preservation methods such as are applicable to dry-salting, shade and suspension drying.

iv) Introduce a grading and selection system which conforms to internal and external world market practices.

v) Introduce and demonstrate improved techniques in the storage of hides and skins and their protection from insect attack through the use of modern insecticides.

vi) Prepare nation-wide legislation which is designed to cover the production, preparation, handling and marketing of hides and skins.

iiv) Develop and encourage the local manufacture of hides and skins, tools and equipment.

It will also cover 6 fellow-ships, each of three months duration for the six Hides and Skins Improvement Officers.

The capital cost of the project will be So. Shs. 1.974 million and operating expenses of So. Shs. 4,287,530 million for five years.

## 19. Artificial Insemination Centres

Artificial insemination of cattle has been carried out in Somalia since 1969, using processed bull semen imported from Kenya. However, the foreign exchange involved, and therefore the restricted supply has limited the use of artificial insemination for breeding cattle in this country. Asa result, the much needed development of the cattle industry in the Somali Democratic Republic has been greately retarded. It is therefore proposed to establish a centre for processing bull semen, so that it is possible to produce diluted bull semen within the country, making it available much more frequently and in considerably larger quantities. Bull semen thus produced locally at the main processing centre can be despatched to several regions in the country where there will be sub-centres with a regular supply of diluted bull semen sufficient for artificial insemination for cattle in those regions. Such a network of artificial insemination centres spread over the country will undoubtedly step up the rate of development of the cattle in the future when the following objectives are achieved :-

1. To ensure the extended use of the breeding merit of selected bulls already imported into the country (with artificial insemination, a single bull can sire a minimum of 5000 cows each year in contrast to about 100 cows per year by natural service for maximum breeding efficiency).
2. To effect the maximum possible rate of spread of genetic material with potentialities for increased production.
3. To accelerate the building up of a more productive national herd of cattle by an increase in conception rate, a decrease in generation interval, and by the gradual eradication of genital diseases by the use of bull semen examined for its quality before it is used for insemination. Continued production of viable semen, which depends on the condition of the animal, should be ensured by locating the semen processing centre, in the Northern Regions, because the weather conditions prevailing there are more favourable than in other regions of the country. It is proposed that the existing State Farm at Gedkadeebleh will be used for this purpose.

Some buildings are available at the farm, and they require modifications and repair to suit the housing conditions necessary for semen donors. The other buildings required are an office and stores, a laboratory room for the collection of semen and living quarters for the staff.

Ten bulls will be required for the production of semen at the main centre at the beginning of the project. They will be selected from the imported bulls presently available in the country, by assessing at first the semen quality and later by progeny tests.

Each sample of fresh semen will be subject to a series of laboratory tests to evaluate the semen quality before it is used for dilution.

The diluted semen will be ampouled and stored until despatch to the sub-centres.

**Sub-centres**

The establishment of sub-centres for artificial insemination will be phased as follows :-

**Phase I : (1974-1975)**

1. Artificial insemination centre at Hargeisa.
2. Sub-centre at Afgoi.
3. Sub-centre at Gelib.

**Phase II : (1975-1976)**

1. Sub-centres at Kismayu.
2. Sub-centres at Baidoa.
3. Sub-centres at Jowhar.

**Phase III : (1976-1977)**

1. Sub-centre at Mogadishu.
2. Sub-centre at Galkayo.

For insemination to be carried out in the field (i.e. a distance away from the premises of the sub-centre) the project provides transport for the field insemniator and equipment. When government transport is used to conduct field insemination, a transport charge of So. Shs. 5 per visit, in addition to a normal inseminating fee of So. Shs. 2 per insemination will be charged from stock owners whenever it is feasible.

Each sub-centre will be manned by a field inseminator whose functions will be as follows :-

1) To arrange to take delivery of the diluted semen despatched by the processing centre, and to return the containers in which he received the previous consignment of processed semen.

2) To examine the quality of semen when received and at intervals thereafter to check on the quality of stored semen.

3) To plan the insemination programme for his region.

4) To carry out insemination work both at the sub-centre and in the region.

5) To investigate problems regarding the application of the technique of artificial insemination, and take suitable action to remedy them.

In a project of this nature it is extremely important to have at the Headquarters in Mogadishu (Livestock Development Agency) a senior staff officer, technically qualified to be in overall charge of the Artificial Insemination Service in the country. He will be mainly concerned with the supervision of the programme in the country and the follow-up work such as the collection of necessary data, etc.

### Training of Field Inseminators

In view of the present acute shortage of personnel trained in this speciality, it is necessary to organise a course of training in artificial insemination of cattle for those who will be recruited as field inseminators. 5 graduates from the Training School for Animal Health Assistants will be selected for such a course of training. The course will be held at the 21st October Dairy Farm at Afgoi for a period of 6 to 8 weeks.

The capital cost of the project will be So. Shs. 1.416 million and the recurrent cost So. Shs. 2.060 million during 1974-1978.

### 20. Dairy Farm - Hargeisa

It is proposed to establish a dairy farm of 3500 heads capacity with an area of 5000 ha. of rangeland within the vicinity of Hargeisa town, the demarcation of which will be subject to a prior survey. It is envisaged that such an area should produce not less than 60 tons of green forage per ha. and a total of 30,000 tons per year.

The carrying capacity of this area will be 3500 including the 2000 dairy cattle. Besides the natural vegetation of this area, it will be necessary to provide fodder supplements — hay, silage and concentrated feed-stuffs in order to attain a higher milk yield and to maintain enough fodder reserves during the dry seasons.

In order to be able to provide the daily feed requirements of the cows it is envisaged to utilise part of this area for the production of hay and silage. The feed requirement will be :-

1. Green forage 20 kg. X 2000 cows X 215 days = 8600 tons good season.
2. Hay 5 kg. X 2000 cows X 150 days = 1,500 tons dry season.
3. Silage 5 kg. X 200 cows X 150 days = 1500 tons.
4. Concentrated feed stuffs 1.5 kg. X 2000 cows X 150 day = 450 tons.

Apart from the 2000 cows for dairy, there will be about 1500 animals consisting of male cattle, calves etc. The yearly feeding of these animals will be met by 7665 tons of green forage and 112.5 tons of concentrated feed-stuff.

The cost of the total fodder production is estimated to be So. Shs. 50,000.

It is planned that the cattle at present reared in Geed-deeble, together with 400 selected cows to be purchased from the local cattle owners, will form the initial stock of the dairy farm, and will gradually be raised to the required size of 3500 heads by reproduction.

In this project, it will not be necessary to purchase and import highly potential breeds of animals, instead the stock will be artificially inseminated making use of the semen production project at Geed-Deeble. The project also includes a sub-centre for artificial insemination so that it may serve the cattle owners residing in the surrounding areas of the farm.

In brief, the following are the measures to be taken for the successful implementation of the Hargeisa Dairy Farm project :

1. The fencing of the area (5000 ha.)
2. Construction of production, living building for animals and personnel.
3. Construction of water supply system.
4. The purchase for agricultural machinery for the purpose of fodder production.
5. Purchase of transportation.
6. Purchase of 400 selected cows.
7. Construction of veterinary station for preventive inspection and veterinary treatment of animals.
8. Construction of A. 1 sub-centre.

At full capacity the dairy farm will supply 1.79 million litres of milk per annum.

The capital cost of the project during 1974-1978 will be So. Shs. 2.673 million and operating cost So. Shs. 3,092,000.

## SECTOR: Livestock - TOTAL INVESTMENT COST

(So. Shillings)

| Sl. No. | PROJECT | 1974-78 | 1974 | 1975 | 1976 | 1977 | 1978 |
|---|---|---|---|---|---|---|---|
| 1. | Intensification of Animal Health | 2,435,000 | 1,000,000 | 1,221,000 | 214,500 | — | — |
| 2. | Parasite Treatment Centres | 1,777,200 | 687,650 | 507,350 | 38,600 | 271,800 | 271,800 |
| 3. | Check-treatment-qarantine Stations | 6,119,395 | 1,500,000 | 923,879 | 923,879 | 923,879 | 1,847,758 |
| 4. | Rinderpest Control | — | — | — | — | — | — |
| 5. | Tse-se Fly Control | 317,500 | 317,500 | — | — | — | — |
| 6. | Veterinary Research Laboratory | 7,847,060 | 7,044,560 | 508,500 | 234,000 | 30,000 | 30,000 |
| 7. | Veterinary Pharmaceutical Project | 1,224,000 | 912,000 | 312,000 | — | — | — |
| 8. | Training School for Animal Health Assistants | 4,834,856 | 1,921,548 | 2,913,308 | — | — | — |
| 9. | Trans-Juba-Livestock Dev. Project | 80,350,000 | 17,149,000 | 28,178,000 | 17,191,000 | 15,371,000 | 2,461,000 |
| 10. | Multi-Purpose Cattle Ranch-Gelib | 4,211,910 | 942,500 | 1,001,300 | 871,370 | 598,370 | 698,370 |
| 11. | Immature Cattle Holding-Marketing | 8,762,700 | 4,387,740 | 1,076,240 | 1,086,240 | 1,101,240 | 1,111,240 |
| 12. | Feed-lots Project | 14,797,800 | 4,514,900 | 6,101,800 | 4,181,100 | — | — |

## SECTOR: Livestock - TOTAL INVESTMENT COST

(So. Shillings)

| Sl. No. | P R O J E C T | 1974-78 | 1974 | 1975 | 1976 | 1977 | 1978 |
|---|---|---|---|---|---|---|---|
| 13. | 21 October Dairy Farm | 2,188,000 | 782,000 | 400,000 | 370,000 | 319,000 | 317,000 |
| 14. | Assura Sheep Holding Ground | 4,488,824 | 1,585,050 | 1,210,374 | 710,000 | 491,700 | 491,700 |
| 15. | Sheep & Goat Ranch-Erigabo | 1,875,040 | — | — | — | — | 1,875,040 |
| 16. | Sheep & Goat Ranch-Galkayo | 1,251,488 | — | — | — | — | 1,251,488 |
| 17. | Model Poultry Farms | 4,103,000 | 661,940 | 670,740 | 874,860 | 1,078,980 | 816,480 |
| 18. | Hides & Skins Improvement | 6,261,805 | 2,770,630 | 1,240,255 | 736,540 | 772,040 | 742,340 |
| 19. | Artificial Insemination Censtres | 3,476,000 | 1,102,000 | 724,000 | 686,000 | 482,000 | 482,000 |
| 20. | Dairy Farm - Hargeisa | 5,765,000 | 1,509,400 | 1,509,400 | 1,509,400 | 618,400 | 618,400 |
|  | TOTAL | 162,087,078 | 48,788,418 | 48,498,146 | 29,627,489 | 22,158,409 | 13,014,616 |

## II. AGRICULTURE

### The Setting and Strategy of Development

The Development Programme 1971 - 1973 has placed self-sufficiency in food production as one of the most important objectives of agricultural development planning. The strategy for attaining this objective, among other things, emphasised the need for assistance to the farming community, establishment of state farms and an agricultural crash programme. The Programme had also laid emphasis on expanding production of commercial crops including exportable crops like banana and Grapefruit. The objectives further gave priority to agricultural projects in support of agro-industries. The level of performance in achieving these objectives has been fairly satisfactory and the country has moved towards increasing the food production. In spite of this, Somalia continues to depend heavily on import of food and food products like rice, wheat flour and vegetable oils.

During the coming years the internal demand for agricultural commodities will increase due both to the increase in population size as well as through increase in per capita demand. Estimates made indicate between 1970 and 1980 the total demand for agricultural commodities including livestock products might increase by a little over 40 percent. This increase in demand for wheat and rice are expected to record an increase of 43 percent respectively and that of coarse grains by nearly 36 percent. Similar increase are expected all around and therefore the agricultural production potential has to match such increases in demand. The development strategy therefore takes into account this aspect in addition to increasing demand for agricultural commodities in the world as a whole.

While the objectives of the Development Programme 1974-1978 will be a continuation of the major objectives which have already been accepted as desirable during the earlier development programme period, the basic objectives derived from the problem of raising the standard of living of the rural population and transforming the strategy of development from an urban based one to rural development will be pursued. The central strategy of achieving these objectives which are part of a long-term objective of transforming the economy into a cooperative one which will ensure maximisation of production with distributive justice will be the organisation of agricultural production in the country and the establishment of state farms. The agricultural development objective also emphasises the need for development of supporting services through research, extension, plant protection and irrigation and projects will be included in the programme to cover the needs in these fields. The continous efforts required by the Government and its agencies in support of intensive and extensive cultivation will therefore be channelled to the traditional sector through a massive effort to organise multi-purpose group farming and production cooperatives all over the country. The role of the individual farmers operating their small parcels of land in the rural areas and who accounts for a major part of the total agricultural output is crucial to development strategy. Cooperative organisations will, over a period of time, consolidate the activities of these farmers in larger operational units. However, the important role of the individual farmstead in the present context cannot be underestimated. The development strategy therefore will be concerned with methods of assisting the individual farmers through services for agricultural production, credit and marketing on as wide a scale as possible. However, taking into account that with limited resources priority action should be located in the initial period in some selected areas, a package programme for concentrating services in the high production areas in the country is also visualised as a strategic measure. For this purpose during the first year a package programme will be implemented in the districts of Jowhar, Balad, Afgoi, Dafeed, Janale and Coriole which will be followed up during the next year in the Lower Juba and Hiran regions. The North-West Region and the districts of Bur Haçaba, Baidoa and Dinsor will be the locations of integrated agricultural projects especially financed by the World Bank.

Even though only 13 percent of the country is suitable for cultivation, there is still great possibilities of expanding agricultural production since only one-eighth of the total cultivable land area is under cultivation at the present time. The development strategy therefore takes into account the fact that while there are cultivable areas which could be brought under cultivation, a joint consideration of utilisation for both agriculture and livestock rearing should be taken for maximising the production potential of the country. The overall strategy during the period of the 1974-1978 Programme will therefore be based on the following.

1. Self-sufficiency will be established for sorghum, maize, oil seeds, cotton, vegetable and fruits by the end of the Five-Year period.

2. Substantial increase in import substitution of rice and wheat will be achieved during this period.

3. Since the development of the country towards a socialist society pre-supposes priority for rural development, the development strategy while assisting the individual farmers will emphasise the need for organising agricultural cooperatives throughout the country in addition to the agricultural crash programme and establishment of State farms.

4. The extension and intensification of agriculture on a large scale pre-supposes the establishment of large scale farms by the public sector as well as social control of production and distribution of privately organised large farms.

5. Agricultural production of a large number of commercial crops will be integrated in production programmes of agro-industries.

6. Policies and programmes for agricultural development will take into account in the first place, the need to encourage mixed enterprise of agriculture and livestock in the rural areas in order to utilise resources to the maximum.

7. Government will intensify the infrastructural activities to support agricultural development, especially agricultural research, extension, marketing organisation, credit institutions and institutions for providing material and technical input services.

8. Irrigation potential in the country will be developed quickly to enable diversification of agriculture especially into export and import substituting crops.

With the substantial increase of efficiency in government organisations and agencies coupled with the determination of the Revolutionary Government for social transformation, the immediate objective of the new Programme is to achieve self-sufficiency in the production of sorghum and maize, including the building up of a buffer stock, oil seeds, cotton and vegetable and fruits by 1978. It is also visualised that substantial increase in the production of rice and wheat will be possible during this period.

## PROJECTS

### 1. Agricultural Extension Service

The work of the Agricultural Extension Service plays an important role in the attainment of sustained agricultural growth in the country. It is through this service that the modern farm techniques are taught to the farmers. The service has the overall responsibility of influencing the physical and mental behavior of the farmers with the aim of raising their economic and social status.

During the 1971-1973 Short Term Development Plan strenuous efforts were made to raise the professional capabilities of the extension personnel by organising a number of in-service training courses. Training programmes for adult farmers were also improved and in addition to the normal shorttraining courses of 2 to 4 weeks, longer duration courses of upto 3 months were introduced to enable the trainees to observe the full cycle of crop production and husbandary practices at each stage. The number of farmers' training centres were raised to 3 with the establishment of 2 additional centres, one at Aborein in the N. W. Region and the other at Genale in the Lower Shabelli. One FAO Agricultural Extension Advisor was attached to the service to assist in plan preparation and its execution.

In order that the service should keep pace with the prevailing revolutionary spirit during the period of the Development Programme 1974-1978 it will be equipped with staff and modern teaching and demonstration facilities. The service will establish 2 more farmers' training centres at Jowhar and Jamama and suitable training programmes will be drawn for centres located in irrigated areas as well as those in rainfed areas. Training of the extension personnel will be vigorously carried out with major emphasis on extension methods, cooperative management, crops production techniques, farm management, soils and water conservation.

Procurement of 8 mobile units from the World Bank through multi-purpose educational project sponsored by UNESCO will enable the service to improve its field teaching practices and methods of dissimination of information.

**Package Deal Approach** — the idea of package deal approach implies combination of farm inputs with extension advice in those areas where human and physical factors are conducive to quick rate of agricultural development. The approach involves concentration of extension effort on limited geographical areas with the aim of enhancing the acceptance of modern technology by the farmers. In Somalia, introduction of this approach in a number of agricultural districts would certainly bring tangible results in a short span of time. The most suitable districts which are ideally located to benefit from this approach are Jowhar, Balad, Afgoi, Dafet, Genale and Coriale. The location of these districts allows easy accessibility to irrigation water, improved seeds, fertilizers and pesticides, and technical services while services to the rest of the agricultural districts of the country will also be strengthened. Introduction of modern technology will be concentrated in these seven districts during 1974 and 1975. In 1976 and 1977 similar programme will be introduced in Lower Juba and Hiran Regions. The N. W. Region and the districts of Bur Hacaba, Baidoa and Dinsor will be served by a separate project for integrated agricultural development.

The investment on the project for strengthening extension service during the period 1974-1978 will be So. Shs. 2,528,370.

## 2. Agricultural Cooperatives

The development of agricultural cooperatives is still at its initial stages. The major contributing factors to such a slow development have been :-

1. Lack of appropriate legal framework governing their organisation.
2. Shortage of management and supervisory peronnel.
3. Inadequate supply of physical assistance either in cash or kind
4. Lack of full understanding by the farmers of their economic advantages.

During the 1971-1973 Programme period efforts were made to awaken the interest of the farmers in the concept of agricultural cooperatives and the economic and social benefits to be derived from them. In 1972 it was reported by the Ministry of Agriculture that 65 agricultural production cooperatives, and one marketing cooperative for onion growers in Bardere were organised. However, in the absence of an effective cooperative law in the country, formation of these cooperatives was more of an ad-hoc nature. In order to give a durable statute to this important type of organisation a cooperative law was promulgated in 1973, in which among other types of cooperatives, the agricultural cooperatives were given top emphasis. Since the concept of agricultural cooperative under a socialist system is new to the farming communities, the law provides a period of «assimilation» during which each farmer will retain his holding but will be a member of multi-purpose cooperative organisation whose functions are to undertake marketing of farm produce, supply of farm requisities, provision of credit and communal self-help tasks.

After creating cohesiveness and mutual trust among the members of multi-purpose cooperative organisations the next step will be the formation of a group farming cooperative whose aim will be to promote common use of services such as machinery, animal power, spraying etc. and infrastructure like irrigation canals. The group farming cooperative will enable the farmers to understand fully the advantages of pooling their resources for their common interest.

The last stage of cooperative formation will be the production cooperative. Under this form of cooperative, farmers will maintain collective use of land either by consolidating their individual land holdings or by acquiring new land. In order to realize better farm incomes maximum use of land and labour under proper production management techniques will be employed so as to demonstrate to others who still cling to the idea of individual farming, the importance of large scale farming. The formation of production cooperatives will enable the Ministry of Agriculture to maintain effective extension services without dispersion of efforts on a large number of individual farmers.

It is recognised that the development of agricultural cooperatives depends on the extent of technical and physical assistances given to them. During the 1971-1973 Programme period a sum of So. Shs. 2,192,000 was earmarked for credit programme intended for agricultural cooperatives. However, the credit provision was not utilised mainly because of the inability of the cooperatives to meet the conditons demanded by the Somali Development Bank who was to have been the source of the finance.

In order to avert a similar occurrence, the Ministry of Agriculture through a newly created Department of Agricultural Cooperatives will ensure strict administrative, financial and technical supervision over the cooperatives. Until such a time when a cooperative is able to stand by itself, the staff of the Department of Agricultural Cooperative will assist the members in book-keeping procedures, farm planning, incomes distribution, and organisational matters.

Since cooperative organisation is expected to play a vital role in the development of the nation's agriculture every effort will be made to raise the technical and managerial abilities of the cooperative members so as to advance their credit-worthiness. In this regard, priority will be given to credit in kind by way of land clearance, levelling, construction of irrigation canals, boring of wells, purchase of farm machinery, building of warehouses and setting up of small cottage industries where possible. Advance of credit to the cooperative by the Somali Development Bank will depend on the recommendations of the Ministry of Agriculture. Strict supervision and guidance on the use and repayment of credit will be undertaken by the Ministry of Agriculture.

The total cost required for agricultural cooperative development during 1974-1978 will be So. Shs. 47.961 million. This cost includes land clearance, preparation and production, training, ration, construction of warehouses, purchase of vehicles and employment of personnel for the newly created Department of Agricultural Cooperatives. So. Shs. 42 million will be for development and production and will be managed as a credit fund by the Ministry of Agriculture. The organisation for administering this will be established in the Ministry during 1974 in the Department of Cooperative.

The types and number of coopreatives, membership and size of area to be developed during 1974—1978 programme period are shown below:

| | 1974 | | | 1975 | | | 1976 | | | 1977 | | | 1978 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Type of Cooperatives | No. | Mem. | Area-ha. | No. | Mem. | Area | No. | Mem. | Area-ha. | No. | Mem. | Area | No. | Mem. | A.ha. |
| 1. Multi-purpose | 10 | 1000 | 1000 | 20 | 2000 | 2000 | 30 | 3000 | 3000 | 40 | 4000 | 4000 | 50 | 5000 | 5000 |
| 2. Group Farming | 50 | 1000 | 1000 | 100 | 2000 | 2000 | 200 | 4000 | 4000 | 300 | 6000 | 6000 | 400 | 8000 | 8000 |
| 3. Production Cooperative | 5 | 150 | 150 | 10 | 300 | 300 | 15 | 450 | 450 | 20 | 600 | 600 | 25 | 750 | 750 |
| | **65** | **2150** | **2150** | **130** | **4300** | **4300** | **245** | **7450** | **7450** | **360** | **10600** | **10600** | **475** | **13750** | **13750** |

## 3. Strengthening of the Agricultural Research Service

The importance of research to agricultural development can hardly be underestimated. Research in agriculture is at an infant stage and in order to lay down a workable foundation for agricultural research in the country, the Development Programme 1971-1973 gave special consideration to the improvement of research activities at the Central Agricultural Research Station at Afgoi. The station has been augmented in staff, housing, transport vehicles, and funds. In addition to the 400 hectares of irrigable land at Afgoi, land for research sub-stations was obtained at Yonte, Bonka, Gedeble and Aborein.

The results accomplished in cetrain crops such as rice have been encouraging. Among the various varieties experimented, two, namely, Dawn and Saturn were found to be adoptable in the country. These two varieties were released for production in government and private farms. Two exotic sunflower varieties were also released in GU 1973 and an area of 600 hectares were sown with sunflower in Afgoi and Janale areas. In the case of groundnuts, varieties like Sudan, Spanish, and Florigiant showed very fine performance in their growth and yields. With regard to grapefruits, the Station after intensive research was able to release JBC Marsh seedless variety to the growers.

During the Five-Year Development Programme 1974-1978, the research service will double its efforts to find quick and suitable solutions to the multitudinonus pressing problems which impair agricultural productivity. The objectives to be pursued during this period are :-

1. To develop improvement programmes for crops with a view to obtaining high-yielding, disease-resistant varieties.

2. To evolve better methods of soils management and water conservation.

3. To study and assess the insects, diseases and weeds problems, their economic importance as well as possible control measures.

4. To disseminate research findings to farmers through the Agricultural Extension Service.
5. To develop nation-wide research activity in the country.

The major fields of research work will centre on the following areas :-

**Agronomy** will include maize, rice, sorghum, wheat, millet, groundnut, sesame, sunflower, cotton, sugar cane and fodder.

**Fruit Crops** will include citrus, papaya, banana, avocado, coconut, mango, grape and many tropical fruits and vegetables.

**Soils** will include soil analysis, water analysis, plant tissue analysis, evaportranspiration, and soil salinity.

**Entomology** will include studies on insects and diseases on all crops with emphasis on major crops and their control measures.

In veiw of the national improtance of the research work a joint FAO-UNDP and Somali Government research project has been finalised to commence nation-wide research activities during the Programme period. The UNDP contribution to the project will be So. Shs. 11,567,430 and that of Somali Government So. Shs. 8,511,090.

## 4. Strengthening of the Plant Protection Service

Somalia's climatic conditions are favourable for the wide-spread incidence of a large number of pests and diseases which take a big toll of valuable crop yield much needed to meet self-sufficiency requirements as well as export. Substantial losses are also encountered during storage. The increased use of irrigation, and the diversification of crops in recent years placed a heavy strani on the country's plant protection service. The introduction of new and high yielding varieties being tested at the Central Agricultural Station will make effective insects and disease control measures even more essential. With the exception of banana plantations all private and public farms depend on the Plant Protection and Locust Control Department of the Ministry of Agriculture for control operations.

In order to cope with the increased demand, a large scale project will be implemented with UNDP assistance. The project will absorb two small scale projects already operating, one for Quelea bird control and the other in respect of plant protection work on pests affecting cotton, maize and sorghum and tests on effectiveness of various insecticides in controlling them.

In addition to absorbing these two small scale projects, the large scale project will include expertise in plant quarantine measures and plant pathology. Short term consultants to advise on control of field rodents and plant nematodes and to assess the economics of spraying from aeroplanes are also included.

One of the factors hampering the activities of the Plant Protection Department is shortage of qualified personnel. In order to overcome this, high priority is given to postgraduate training in all fields covered by the project.

The project will cost So. Shs. 20,159,800.

## 5. Agro-Meteorology Development

Even though there exists a meteorological department in the Ministry of Communication, the department does not carry out operations on Agro-Meteorology which is important for the development of agriculture in the country. Since agricultural development is given great priority, it is essential to establish Agro-Meteorological stations in the more agriculturally developed areas.

Furthermore it is recommended that for this purpose an Agro-meteorological section responsible for :

a) Collection of data
b) analysis,
c) forecast and,
o) water requirement for the crops be established.

Agrometeorological stations and posts will be established in the following places :-

1. **Benadir Region**
   a) Afgoi
   b) Janale
   c) Jowhar

2. **Upper Juba Region**
   a) Bonka (Iscia Baidoa)
   b) Bardera

3. Lower Juba Region
   a) Gelib
   b) Yontai

4. **Hiran Region**
   Belet-wein

5. **North-Western Region**
   a) Tug-Wajaleh
   b) Aborein

6. **North-Eastern Region**
   a) Hahi (Odweine)
   b) Bar
   c) Erigabo

For a detailed Agro-meteorological study, the following measuring instruments will be installed in each station :-

a) Thermometers for soil and air temperature
b) Wind-vane
c) Soil moisture meter
d) Evaporation pan
e) Rain gauges
f) Sun radiation meter
g) Compasses
h) Hygrometers for relative humidity.

The total cost of the project will be So. Shs. 982,000.

### 6. Grain Storage

The Agricultural Development Corporation has been delegated the responsibility for the marketing of food grains, oil crops, and cotton in the country. The Corporation when it commenced operation in 1971 acquired 3 warehouses and 3 silos of a total capacity of 112,000 quintals of grains. During the Programme period the Corporation was able to erect additional storage facilities for 953,200 quintals of grains. In addition, 120 medium to small size stores were being rented at cost of So. Shs. 44,000 per month.

During the 1974-1978 Programme period, the Corporation will greatly expand its marketing operations both in the production and consumption areas in the country. The Corporation is expected to deal with all the marketable food and cash crops to be produced during the Programme period by private and public farms. In order to fulfill this important service, it is imperative that it should augment its present storage capacity. For this, the Corporation plans to construgt the following facilities during the 1974-1978 period.

| Type of Store | Number | Capacity (quintals) | Cost (So.Shs.) |
|---|---|---|---|
| Warehouses | 25 | 500,000 | 2,500,000 |
| Plinth | 30 | 150,000 | 60,000 |
| Pits | 75 | 750,000 | 3,750,000 |
|  | 130 | 1,400,000 | 6,310,000 |

## 7. Farm Machinery

ONAT is the Government organisation responsible for the renting of farm machinery to private and public farmers. The organisation obtained its first batch of machinery from the USSR in 1963-1964. to date there are 367 tractors out of which 121 are S-100 and rest various types of light-power tractors. Since the bulk of the tractors have been operational for nearly 10 years it is assumed that almost 70% of them have reached obsolescence.

Compared to 1970, tractors output (in hours) in 1971 was increased by 16.8 percent and by 33.5 percent in 1972. In 1975 an increase of 17.4% is envisaged compared to 1970. It should be noted, however, that the largest increase was obtained at the expense of a better use of the 100hp tractors. The output of the 54-hp tractors was reduced by 6.3 percent in 1971 as compared to 1970 and in 1972 by 4.7 percent. Likewise, the output of the 48-hp tractors was reduced by 26.7 percent in 1971 and by 20.2 percent in 1972.

In spite of a greater level of utilisation, a glaring deficiency in the quantity of farm machinery is apparent and ONAT will hardly be able to cope with the expected demand for machinery services during 1974-1978 Programme period. Since irrigated land will be vigorously developed during this period, ONAT will require heavy duty machinery for such work as land reclamation, land levelling, and opening up of irrigation network. Equally, there is need for additional tractors for land cultivation. The organisation will also build workshops and garages in a number of agricultural districts. The total amount required for the purchase of machinery, implements, and construction of 6 (six) workshops for the garages during the programme period is So. Shs. 35,551,574. The following table shows the construction programme for workshop and garages:

### CONSTRUCTION OF WORKSHOPS & GARAGES

| Place | Year of Construction | Plinth area (M²) | Cost(So.Shs.) |
|---|---|---|---|
| Shalambot | 1975 | 1080 | 283,430 |
| Afgoi | 1974 | 936 | 282,836 |
| Beletwein | 1975 | 360 | 121,897 |
| Baidoa | 1976 | 360 | 121,520 |
| Hargeisa | 1975 | 1440 | 591,520 |
| Mogadishu | 1974 | 1584 | 149,994 |
| | | | **1,551,574** |

### .8. Rice Production Programme

Rice is an important food staple for the urban population of the country. In 1972, 36,172 tons of rice worth So. Shs. 36,000,00 were imported. Figures for the first quarter 1973 indicated a rising world price of rice by over 30%. It is recognised that this country can not afford to lose its hard currency on rice whose cultivation locally has been proved successful. The technical know-how for upland rice cultivation is available since experimentation on it was going on since 1965.

The rice production programme will be carried out by the Agricultural Crash Programme, Afgoi-Mordinle Irrigation Development Project and the progressive agricultural cooperatives and plantation owners in irrigated areas. The area expected to be put under cultivation during the plan period will be 4000 hectares to be managed by a special technical unit to be created in the Ministry of Agriculture. Rice has certain requirements by way of land preparation, weed control, harvesting threshing, and hulling. These requirements necessitates purchase of machinery solely tailored to the rice production programme.

It is proposed to purchase the following items of machinery for this project.

## MACHINERY & FARM INPUTS REQUIRED
## FOR 4000 HECTARES OF RICE

| Type of Machinery | Number | Cost (So.Shs.) |
|---|---|---|
| 1. Tractors | 40 | 1,600,000 |
| 2. Drills | 40 | 600,000 |
| 3. Harvesters | 16 | 2,400,000 |
| 4. Hullers | 40 | 800,000 |
| 5. Threshers | 40 | 100.000 |
| | TOTAL | 5,500,000 |

Additionally the project will require the following items of input:-

| Item | Quantity (Quintals) | Cost (So. Sh.) |
|---|---|---|
| 1. Fertilizers | 4000 | 600,000 |
| 2. Herbicides | 4000 | 384,000 |
| 3. Seed | 4000 | 440,000 |
| | Total: | 1,424,000 |

### 9. Agricultural Crash Programme.

The Agricultural Crash Programme which is run by a semi-autonomous Agency has passed its initial phase of development. The project will in future enter into a vigorous productive phase so as to achieve the following primary objectives:

1. Augmentation of national food production to attain sustained self-sufficiency with emphasis on import substituting crops.
2. Check migration away from rural areas by offering employment to active young people.
3. Reorient the occupational aptitude of the people into farming occupation by improving their skill and attitudes.

Technically, the programme will endeavour to:

1. be self-financing;
2. concentrate on the production of agricultural commodities which are in short supply in the country.
3. increase the output per unit area in an intensive system of farming, particularly in the irrigated areas.

At present, the project cultivates a total area of 7,550 ha. of which 4,050 ha. are in the irrigated areas and the remaining 3,500 ha. in the rain-fed areas. 6000 volunteer workers are engaged in the projects.

During 1974-1978 the project will develop a total area of 7,500 ha. of which 5000 ha. will be irrigated and 2,500 ha. will be rain-fed. The project will employ an additional 600 volunteer workers for its operation during the Programme period. Parallel to the development of new areas the project will improve the production, management and land-water condition of the existing farms.

In order to raise the management standards both technically and administratively, the project will be strengthened with professional staff of medium and higher level education while at the same time establishing close links with the agricultural research service of the Ministry of Agriculture.

The distribution of land development and employment of volunteer workers during the period is given below:

| Year | Irrigated | Non-irrigated | Total | Number of olunteer Workers |
|---|---|---|---|---|
| 1974 | 5,000 | 4,000 | 9,000 | 7,200 |
| 1975 | 6,000 | 4,500 | 10,500 | 8,200 |
| 1976 | 7,000 | 6,000 | 13,000 | 9,600 |
| 1977 | 8,000 | 5,500 | 13,500 | 10,800 |
| 1978 | 9,000 | 6,000 | 15,000 | 12,000 |

The major costs to be incurred by the project during the Programme period will be employment of volunteer workers whose expenditure on wages, food, clothing and medicine by 1978 will reach So. Shs. 16,944,000 for 12,000 volunteer workers. The project will also appoint new professional staff to replace those at present working on deputation from the Ministry of Agriculture. Development of new land and reclamation of the present land by ONAT machinery on rent will entail increased cost.

The project will grow sorghum, maize, rice, groundnuts, sunflower, tobacco, and cotton and generate enough revenue to make it self-financing. It will adopt not only horizontal expansion but also vertical development through improved production techniques and using high yielding seed varieties.

Assuming a conservative yield per hectare for each crop the project is expected to obtain the following gross returns from the sales of the crops:

|  | So. Shs. |
|---|---|
| 1974 | 13,000,000 |
| 1975 | 16,782,000 |
| 1976 | 20,432,000 |
| 1977 | 27,540,000 |
| 1978 | 31,240,000 |
| **Total:** | **108,994,000** |

The total cost of the project will be So. Shs. 112.5 million.

## 10. Pilot Farm for Irrigated Agricultural Development.

On the recommendation of a feasibility study financed by the United Nations Development Programme (Special fund) a pilot farm for irrigated agricultural development of 108 hectares adjacent to the Afgoi-Mordinle Irrigation Project was established in 1972. The total cost of the pilot farm during a two year, 10 months period was estimated at So. Shs. 3,510,960 out of which So. Shs. 2,887,960 consisted of a UNDP contribution and remaining So. Shs. 623,000 the Somali Government contributoin. This project was included in the Development Programme 1971-1973 for implementation.

The primary objective of the farm is to determine the best irrigation and drainage system for the cultivation of important food and cash crops, like rice, groundnut, sunflower, sesame, cotton, etc. and to study and supply information on labour inputs, timing of field operations and farm economy. The findings of these studies were to act as guidelines for the implementation of Afgoi-Mordinle Project as well as other similar projects.

The first field trials were started in Gu, 1973 by growing 8 hectares of upland rice, 36 hectares of groundnuts and 24 hectares of sunflower. Cotton among other crops would be grown during Der season of 1973.

As the project has encountered delay in implementation of field operations during its first year of operation, it is anticipated that the original estimated time would not be enough for the completion of the assigned tasks. In view of this, a request has been made to UNDP to extend the duration of the project till the end of 1976 in order to cover four full years of agriculture seasons.

The project will cost So. Shs. 1,924,200 during 1974-1978.

### 11. Afgoi-Mordinle Irrigation Project.

Following the study carried out by the United Nations Development Programme (Special Fund) concerning a controlled irrigation pump scheme on an area of 3,000 ha. at Mordinle in Afgoi District the Government decided to implement this project with the financial participation of the African Development Bank.

The project involves:

a) Mechanical land clearing of bushes on an area of 2,800 ha. This will be followed by ploughing and levelling.

b) A pumping station equipped with four pumping units which will provide for a minimum irrigation requirement of 5,50 cumecs over a pumping period of 14-19 hours a day.

c) A maximum drainage requirement of the order of 18 cubic meters per day.

d) Development of access roads surrounding the villages and field access roads and installation of telephone lines. For administration and project headquarters, provision of buildings which include an office, stores, workshops, and store facilities together with public utilities has also been made.

c) The resettlement of the displaced farmers.

The crops selected for cultivation are cotton, sesame, groundnuts, and rice/maize. The selection is based on the examination of the enviornmental conditions of the country and results of investigation carried out by the Central Research Station. The selected crops will be planted on 3,000 ha. divided into two equal parts, i.e. 1,500 ha. each using a double course rotation over the two seasons. This intensive cultivation schedule will necessitate a certain degree of mechanisation. The project will nevertheless generate employment for 150 permanent staff and 1,000 seasonal labourers. To achieve the assumed crop yield an adequate irrigation system is proposed. Intensive application of fertilizers, insecticides for pest control and control at preplanting stage will be carried out. At full production inthe 5th year, the project will annually produce 3,000 tons. of seed cotton, 2,550 tons of shelled groundnuts, 1,200 tons of sesame and 5,500 tons of rice.

The Cropping pattern envisaged for the project and estimated total production are shown below:

| Crops | 1974 | | 1975 | | 1976 | | 1977 | | 1978 | | Total 5-Year |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | ,Area | Production | Area | Production | Area | Production | Area | Production | Area | Production | Production |
| 1. Cotton | 750 | 1125 | 1500 | 2250 | 1500 | 2700 | 1500 | 3000 | 1500 | 3000 | 12,375 |
| 2. Groundnuts | — | — | 750 | 900 | 1500 | 2250 | 1500 | 2550 | 1500 | 2550 | 8,250 |
| 3. Sunflower | 750 | 900 | — | — | 2000 | 2600 | 2000 | 2600 | 3000 | 4200 | 10,300 |
| 4. Sesame | — | — | 1500 | 9000 | — | — | — | — | — | — | 9,000 |
| 5. Rice | — | — | 750 | 1500 | 1000 | 2000 | 1000 | 2000 | — | — | 5,500 |

Area in hectares

production in metric tons.

The total cost of the project is So. Shs. 19.90 million. So Shs. 3.5 million has already been utilised for the bush clearance of 4,300 hectares and the development of 750 ha., canalisation, administrative structures, and engineering designs. The rest of the funds will be utilised during 1974 and 1975.

### 12. Fanole Irrigation Project.

The Juba River with its most reliable water supply has great irrigation potentiality. While under natural flow the river can irrigate 106,000 hectares, with regulated supply, its irrigation potential can command upto 150,000 hectares.

The Fanole Irrigation Project is the first stage of Juba development scheme which was studied in 1963-1964 and subsequently updated in 1972-1973. The project consists of:

1. Construction of a diversion dam.
2. Generation of hydro-electricity of 5000 kwt.
3. Opening of 52 km. of canals.
4. Establishment of a 8199 ha. State farm.

The net total of the land to be commanded by the irrigation network is 8199 hectares whose development will be carried out in 7 years from 1974. The lands of classes I and II will be developed in the first stage and until headwork construction is completed irrigation water will be supplied with the help of mobile diesel pumping stations. Upon completion of the headwork, class III land development will begin. During the first stage of development, a 1,054 hectare cotton farm will be established with supply of water from temporary water intake structures at the north of Kalalio.

The second stage of land development will be on the area of oil crop farms totalling 1656 hectares. Irrigation water for these farms will be supplied from a temporary water intake on the Juba River near Bender Salam.

At the third stage of land development all the rest of the lands will be put into crop rotation while irrigation water will be supplied from temporary intakes near Gelib with 3 mobile pumping stations.

The fourth stage of land development comprises class III land of the cotton and oil crop farms. This will begin when gravity water supply through the main canal is completed in the second quarter of 1978.

The project will grow such crops as cotton, sesame, groundnuts, maize, and lagumes. In addition, a small herd of 475 cows and 25 bulls will be raised at the farms and fed with the fodder crops produced by the project to determine their growth in terms of dairy and beef yields.

The total project cost is estimated at So. Shs. 281,873,600 out of which So. Shs. 159,504,100 will be received through bilateral assistance.

## 13. Balad Irrigation Development Project.

On the basis of studies conducted by the Agricultural and Water Survey and subsequent feasibility studies undertaken through the project Water Control and Management of the Shabelli river, the Revolutionary Government which is fully committed to the development of agriculture has concluded an agreement with the Democratic Peoples' Republic of Korea to execute jointly the work of the Balad Irrigation Development Project.

The project aims at the development of 10,000 hectares under permanent irrigation to grow rice, cotton, groundnuts, sesame, and fodder crops. The irrigation infrastructure will consist of a barrage to raise the river water level and irrigation network commanding 10,000 hectares.

The total cost of the project is estimated preliminarily at So. Shs. 160 mill. out of which So. Shs. 48 mill. will be the Somali Government contribution.

This project when fully implemented will contribute in a large measure towards realizing import-substitution through the following anticipated crop pattern.

| Crop | Area ha. | Production (tons) |
|---|---|---|
| Rice | 2000 | 6000 |
| Cotton | 5000 | 5000 |
| Oil Seeds | 2500 | 2500 |
| Fodder | 500 | 1500 |

## 14. Banana Development.

Production of banana took an upward trend during the 1971-1973 Development Programme period. In 1972, the total export increased by 30% over that of the previous year compared to 26% in 1971. While expansion of area under banana was the major reason of this sharp increase, introduction of improved cultural practices, intensive sprayings, and better application of fertilizers had an influence on the yield.

On the marketing side, the National Banana Board concluded banana trade agreements with countries in the Middle East and with the German Democratic Republic while maintaining the usual level of export with Italy.

It is a known fact that banane represents an important sub-sector of export earning for the country. Moreover, it offers direct or indirect employment to no less than 200,000 people. In view of such great importance to the national economy, development of this crop will be given strong emphasis during the 1974-1978 Programme period. The development strategy for this will be:

1. The National Banana Board in addition to its marketing function will enter into production activities. The Board will establish model farms which will serve the dual purpose of:
   - i Augmenting national banana production;
   - ii. Demonstrating and processing with sufficient and technically advanced infrastructural facilities.
2. The provision of technical and physical assistance to the banana growers will be strengthened in order to enable them to raise their production both in quantity and quality.

The viability of the banana industy largely depend on its competitiveness in internatoinal markets. One major hurdle presently facing the Somali banana is the comparative low yield coupled with rudimentary processing methods. Hence, the primary objective of the model farms is to introduce application of modern technology in the banana industry so as to put it on an equal footing with banana industry in he leading producing countries of the world.

Toward this objective, the National Banana Board will establish two farms each of 250 hectares in Golwein and Kalanji in 1974.

The total cost of the two medium size farms will be So. Shs. 20,000,000.

The anticipated production from the farms will be 10,000 tons per year.

The farms will have the following modern installations:

1. Concrete lined irrigation canals;
2. Modern packing centres;
3. Telephone line from the farm to the packing centres;
4. All weather link roads.

It is envisaged that the areas occupied by private banana plantations will increases from 8,900 hectares to 10,000 hectares 1974-1978 Programme period, producing a total exportable quantity of 150,000 tons.

The National Banana Board will strengthen its technical service wing in order to enable it to provide effective technical advice to the banana farmers on all aspects relating to fertilizers, disease and insects treatment, irrigation and drainage practices. The Board will also provide the following physical incentives:

1. Maintenance of a reasonable market price to the farmers.
2. Distribution of fertilizers and insecticides at cost price,
3. Provision of credit facilities in cash or in kind.

### 15. Integrated Agricultural Development.

The integrated agricultural development project which will concentrate its activities in the N.W. Region will aim at proper conservation of soil and water in areas where erosion has become hazardous, introduce multiple cropping system along with intensified extension services, develop production, and study and recommend the best possible ways of utilising flood water of major tugs in the Region. The project will be jointly financed by the Somali Government and the World Bank and it will bring cultivation of sorghum, oil crops, legumes and fodder to an area of 30,000 hectares distributed in the three districts now suffering high percentage of run-off and severe erosion on arable fields. While the present low yields of sorghum will be raised by introducing high yielding variety coupled with extension services the practice of diversifying the agricultural pattern of the Region will also be carried out. In addition, the project will establish a pilot farm of 1,000 hectares grown with wheat at Tug-Wajaleh plain with the objective of investigating possible ways of implementing large scale wheat production programme in the area in order to achieve self-sufficiency in this cereal.

It is estimated that there are 120,000 hectares of arable land in the North West Region out of which 60,000 hectares have been subject to severe erosion. The major factor contributing to this problem is the high rainfall intensity which leads to a high percentage of run-off and severe erosion on arable fields and drainage gullies which show gradual increase each year. The areas which are hit hard by the erosion damage are mostly confined to arable land in Borama, Gabile, and part of Hargeisa District, where due to this growing natural hazard crop production has dwindled.

In order to check the menace of erosion, it is planned to carry out bunding operations on 30,000 hectares in the three districts as a first phase to be followed by the remaining affected areas later on. While 20,000 ha. are to be newly bunded the rest of 10,000 hectares will be repaired. In addition to bunding operation, farmers in the project area will be given intensified extension services to improve husbandry practices, the use of new seeds, fertilizers, and animal manure and demonstration of new farming systems involving the production of food grains oil seeds and fodder crops integrated with livestook production. The farm communities in the project area will be provided with potable water for human and animal consumption.

North-West of Hargeisa lies the Tug-Wajaleh plain comprising 24,000 ha. of arable land. The annual mean rainfall is 505 mm. with a well established crop cultivation of sorghum and wheat. In order to determine the best possible way of introducing large scale mechanised wheat farming a pilot farm of 1,000 ha. of wheat will be set up in the area with supplemental farming areas to be cultivated by the farmers on a cooperative basis. The farmers will be assisted by the project by way of improved seeds, oxen ploughing, and technical advice. In addition, 750 ha. will be devoted to fodder production in rotation with cereals. A small breeding herd would be established to investigate the potential of local stock and fattening trials carried out on native and improved pastures.

In the North-West Region there has been spontaneous establishment of fruits and vegetables gardens along the main tugs. Places where these gardens have shown encouraging results are Horadhadley and Daraweine in Gabile District; Arabsiyo and El-Bardale in Gabile District, and Amoud valley in Borama District. The major cash crops from these gardens are oranges, lemon, papaya, guava, kat, cabbages, lettuce, leek, and onion. Among these crops, oranges have obtained good market outlets, internally and externally. In order, therefore, to raise the quality and quantity of the orange cultivation, irrigation facilities like water pumps and pipes will be provided to the citrus growers through easy credit arrangements. An international horticulturist with wide experience in citrus growing techniques will be posted in Hargeisa to reactivate Geeddebley citrus nursary station and to provide extension services to the citrus growers.

In addition to the existing gardens, 50 new farms would be established. The cost of establising these farms will include cost of land clearing, levelling, provision of wells and installation of pumps and pipes. Farmers will also be provided with high quality root stocks for propagation.

The potential for irrigation development of the North-Western Region would be evaluated by carrying out a feasibility study on availability of underground and surface water resources. The study would include:

- Photogeological research and interpretation;
- The establishment of a limited network of hydrogeological stations;

- Test borings in alluvial areas;
- Preparation of development proposals.

As a result of the hydrogeological study irrigation areas would be selected and a number of projects would be recommended for implementation. To this end the feasibility study would include proposals on cropping pattern, estimates of costs and revenue and recommendations on the organization required.

It is obvious that ADC, being the Government organ responsible for marketing of agricultural crops, will be expected to accommodate the increased marketable sorghum and other cereals from the project areas. On top of already existing storage facilities, additional storages of above and underground types will be established to enable ADC to augument its storage capacity in the North-West Region.

Feasibility studies for the preparation of the above project are proposed to be conducted. These would focus on an integrated development approach with main emphasis on intensified extension services, use of farm inputs, expanded farmers and staff training and improved marketing of crop and livestock. It is expected that as a result of these studies investment proposals for financing development of Bur-Hacaba/Baidoa area which offers great potential for dryland farming would also be drawn out.

Total project costs (including expatriate technical assistance) are estimated at So. Shs. 44.320,000 out of which So. Shs. 38.087,500 will be paid by the World Bank and the remaining So. Shs. 6.232,500 by the Somali Government. However, this cost is expected to rise in the appraisal report.

The components of expenditure would be as follows:

| | | | |
|---|---|---|---|
| — Land conservation and Development | So. | Shs. | 20,775,000 |
| — Improvement of Research and Training | » | » | 2,770,000 |
| — Pilot Farm at Tug-Wajaleh | » | » | 5,540,000 |
| — Water supplies for the human population and for livestock | » | » | 2,770,000 |
| — Small scale farm irrigation development | » | » | 6,232,500 |
| — Feasibility study for underground and surface water utilisation | » | » | 3,462,500 |
| — Additional grains storage facilities | » | » | 692,500 |
| — Feasibility study for integrated dryland farming project in Bur Hacaba/Baidoa area | » | » | 1,385,000 |
| — Training and Fellowships | » | » | 692,500 |
| **Total:** | **So.** | **Shs.** | **44,320,000** |

## 16. Grapefruits Seedling Multiplication Centre.

This centre was established in 1972 to produce good quality seedlings of grapefruits for use in the large grapefruits plantations. The centre has an area of 70 hectares irrigable by the river and a well for irrigation during the low-flow period. It has been established with the purpose of:

1. producing and distributing selected grapefruits seedlings;
2. defining the optimum cultural practices for grapefruits;
3. establishing pilot farms for demonstration of proper production mangement.

The establishment of infrastructural facilities and preparation of land were completed between September 1971 and July 1972. Three different root stocks planted in November 1972 were sour orange, rough lemon, and citranger. While the first two have shown remarkable performance the citranger showed poor adaptation. The grapefruits to be used for grafting are marsh seedless, red blush, reed, and PC marsh.

The expenditure incurred by the centre for building, land preparation, levelling, irrigation, machinery and management from September 1971 to December 1973 was So. Shs. 787,100.

During 1974-1976 a total of So. Shs. 545,000 will be spent on this project.

## 17. Grapefruit Cultivation.

In order to break away from a monoculture export economy, it is the policy of the government to diversify agricultural production so as to produce other exportable crops than banana. Cultivation of graperfruits has been proved to have a promising future as a dependable export crop and government has therefore decided to implement a large scale project to cultivate this crop.

The project visualises cultivation of 3000 hectares, between Golwein and Sahingani, half of which will be planted with grapefruits and the other half with seasonal crops. It is expected that yields of 30 tons of grapefruits per hectare could be obtained, 50% of which would be export quality.

Feasibility studies and preliminary designs of the project started in 1972. Studies, evaluation and preparation of engineering services of the following technical, economic and social matters have been conducted in 1973:

a) Topographic and cartographic studies;

b) Soil studies:

c) Hydrological studies;

d) Eco-sociological studies;

e) Agronomic studies;

f) Marketing possibilities;

g) Design of irrigation and drainage canal network.

The total cost of the project will be So. Shs. 91,142,532 out of which So. Shs. 1,640,532 will be the cost of the feasibility study and engineering services.

The development of 3000 hectares will be completed by 1976 and will be phased in the following manner:

| | 1974 | 1975 | 1976 | Total |
|---|---|---|---|---|
| Grapefruits | 250 ha. | 550 ha. | 700 ha. | 1500 ha. |
| Cereal crops | 550 ha. | 550 ha. | 700 ha. | 1500 ha. |

## 18. Date Plantation.

The Revolutionary Government has been considering ways and means of raising the social and economic standards of the people living in the coastal areas of the Northern Regions. One of the promising fruit trees which would offer reasonable returns to the people in these areas is date. In Besasso Region some 200,000 majure palms are grown presently in over 70 locations. These date palms are under depleting conditions and demand an urgent rejuvenation programme. On the other hand, there are a number of date nursary stations in the N.W. and Togdhere regions which have been recently handed over to the Ministry of Agriculture.

In order to make these nursary stations sources of young shoots to the interested farmers and government farms, some reactivation work have been carried out by the Ministry of Agriculture. There are now about 4,500 shoots ready for transplantation in the stations.

To make the country self-sufficient in dates will require the development of 3000 hectares, which in turn necessitates importation of 100,000 shoots at the rate of So. Shs. 40 per shoot. For the implementation of a large scale project for date cultivation in future, it is planned to undertake a small scale project at Bullahar, Halan and at Eil Sheikh in the North-West Region with 250 hectares in each place. In addition, 200 hectares among various agricultural cooperatives and the Custodial Corps farm at Bihin will be planted with dates raised in the nursary stations.

To encourage date growers in the up-keep of the existing palms and for planting on new lots, it is desirable to provide credit facilities for purchase of small pumps and digging earth wells. It is anticipated that 1,200 ha. of privately owned plantations will require a total outlay of So. Shs. 1,000,000. The 700 hectares of newly planted area will start yielding during the 5th year of Programme period. On the basis of a yield of 29 kg. per palm total production will be 8,800 tons valued at So. Shs. 2,800,000.

The groves to be rehabilitated will start fruiting from 1975 onwards and assuming that 70% of the palms will be rejuvenated, (due to the damages sustained during the 1972 cyclone) annual production will be 2,800 tons valued at So. Shs. 2,800,000.

The cost of the project will be So. Shs. 7.073,000 including So. Shs. 1.0 million as assistance to private farmers.

## 19. Study on Swamp Reclamation Development.

Increase of rice production is essential to Somalia in order to stop its importation and to satisfy the national food requirements.

The establishment of a large rice development scheme in the area covered by swamps in the Lower Shabelli course, south of Falcheiro, would permit the increased production of rice and improve the sanitary conditions over a large are where water is available.

## 20. Sugar Cane Plantation:

The country's sugar consumption has increased from 25,000 tons in 1963 to 45,900 in 1970, about 80%, at an average rate of 10% per

In the face of such an increased sugar consumption level local production of sugar by SNAI in recent days has not exceeded more than 35,000 tons, leaving the country with a deficit of 10,000 tons a year. In order to reach self sufficiency in sugar production, a new sugar factory with 50,000 tons capacity will be established in the Lower Juba at an estimated total cost of So. Shs. 247,865,000 out of which So. Shs. 101,096,000 will be the cost of the plantation, which includes land reclamation, canalization, infrastructures, machines and equipment.

The sugar cane plantation will consist of a gross area of 8000 hectares with a net cultivable area of 6,856 hectares. The development of the plantation will be phased as shown below:

| Area | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 |
|---|---|---|---|---|---|---|
| (ha.) | 58 | 123 | 1806 | 3489 | 5172 | 6856 |

In order to obtain reasonable yields modern cultivation techniques will be employed while better sugar cane varieties will be introduced in the farm. Yield per hectare from the various cuts will be as follows:

| | |
|---|---|
| 1st Harvest | 1,180 qts/ha. |
| 2nd Harvest | 990 qts/ha. |
| 3rd Harvest | 800 qts/ha. |
| Average | 990 qts/ha. |

The agricultural potentialities of the soils and the water resources of this zone have been studied by the Agricultural and Water Survey of Somalia during 1961-1967, which points to development potentials. More detailed information are necessary before implementation plans of a first 5000 hectares project for swamp reclamation and rice production can be furnished to investement sources.

It is therefore proposed to carry out a feasbility study and lay down the plans for financing and execution of the scheme. The following scheme of work is proposed to be implemented:

1. Desk study on the impact of the Jowhar off-stream storage, and Balad diversion canals and other hydraulic structures and schemes upstream on swamp's water balance.
2. Survey of the area based on aerial photographs of the Genale-Avai area; detailed ground control over 25 sq. km. area adjacent to Falcheiro; for the rest of the swamp area contours to be plotted where ground control is not possible.
3. Semi-detailed soil survey of area adjacent to Falcheiro and extending 25 km. downstream.
4. Hydrology study of in-flow/out-flow to be initiated with main river gauging station at Gaivero and Avai bridge.
5. Examination of access and all weather communication facilities in the swamps area.
6. Considerations related to possible settlement and infrastructure.
7. Assessing tsetse fly and quelea birds infestation with proposal to control.
8. Assessing present land capability and future croppnig pattern with flood control and drainage.
9. Assessing potential for livestock development.
10. Proposal for phased development with costs and estimates.
11. Estimated impact of the project production on the national economy and internal pattern of capital costs.
12. Processing and Marketing.

The project will cost So. Shs. 5.4 million.

## 21. Jowhar Off-stream Storage.

In most of the years the flow of the Shabelli river is insufficient to satisfy the water requirement of the perennial crops (sugar cane, banana and citrus). During the drought season — January to April, the river flow becomes too meager especially in the last two months to allow sufficient water for irrigation in the Lower Shabelli basin. Even the sugar cane plantation at Jowhar suffers from a low watering ratio Farmers, therefore, resort to deep well pumping at great expense to maintain their plantations in survival condition.

The study on the water control and management of the Shabelli river in 1969 mentioned the possibility of on-stream storage to solve this problem but first estimated costs showed that capital investment could be too high. It was suggested, therefore, that an off-stream storage of about 190 million cubic meters capacity should be built in a depression south of SNAI to store water during the high flows of the river, between September and December. Water could subsequently be released during the period of drought. Investigations revealed that such a scheme would meet the water requirements of about 16,000 hectares of perennial plantations in the down-stream area and also reduce the threat of flood damages to area down-stream of the proposed off-take.

The off-stream storage will permit the diversion of any flow over 50 cubic meters per second to fill the reservoir with a maximum of 50 cumecs extracted any time. A minimum of 50 cumecs could always be allowed to pass the off-take site and flow into the river bed.

During the period of low flow, pumping into the reservoir would take place to provide a supply of water to SNAI; a gravity outlet at the southern end of the reservoir would allow water to escape to the Shebelli river for use down-stream.

In 1973 the project cost was re-estimated at So. Shs. 35,000,000. The engineering services of the project was completed at the end of 1973 at a cost of So. Shs. 764,370.

### 22. Dredging Shabelli River and Canal Desilting.

Studies of the Shabelli river characteristics and hydrology point to a constant decrease of the channel capacity from 400 cumecs up stream at Beletwein to less than 90 cumecs down stream at Audgele. The river bed is so silted during its stretch through the swamps downstream from Falcheiro that only a thin permanent stream can reach Avai.

Several diversion weirs built between Beletwein and Falcheiro obstruct the free flow of the river water, slow down its velocity and cause silting.

The aims of the project is to provide the irrigation section of the Ministry of Agriculture with heavy equipment, transport and staff to enable it to:

- desilt the Shabelli river channel in order to make easy use of the sluice gates and introduce a permanent rotation practice in opening of the gates which will assist in reducing the silting and avoid blocking by silt.
- Dig the river bed where heavy silting reduces the river and channel capacity.
- Desilt the canal network to satisfy the water requirement of banana plantations.
- Repair and maintain the river embankments and reduce flooding and over spillages.

Two irrigation centres with adequate equipment and staff will be set up in Genale and Jowhar. In addition, a small emergency mobile workshop would be stationed in Mogadishu to repair the equipment in the field especially to satisfy emergency requirements.

The total cost of the project will be So. Shs. 7.085,000 out of which So. Shs. 5,060,000 will be the cost of equipments.

### 23. Construction of Bardere Reservoir and Development of Fanole-Gelib Area.

The Juba River and areas adjacent to it offer great potential for the development of agriculture. There are vast areas of land suitable for irrigated agriculture as well as water resources necessitating development of the Juba basin. The study on the Juba River Scheme has shown that the irrigation capacity of the river could be raised to 148,600 hectares if a flood detention reservoir is constructed at Arrents, 35 km. above Bardere. The reservoir will not only permit irrigation of all lands in the river basin but it will also limit floods along the basin area. In addition, the reservoir will creat more favourable conditions for the use of the river flow for the power needs and thus will increase the coefficient of use of the Fanole hydropower plant.

The total storage capacity of the reservoir is 1.6 cu.km. The reservoir is, moreover, designed to transform the maximum flood discharges of 5 percent probability to 700 cumecs with no overflowing effect on the river banks.

The construction of the reservoir can be justified economically only if subsequent development of irrigable lands in the lower river basin take place. In accordance with the development priority laid down in the Juba River Scheme expansion of lands commanded by the Fanole headworks has been given first priority once the flood detention reservoir is constructed. It is to be noted while development of 8,000 hectares under Fanole Project will be irrigable by the Fanole headworks under natural river flow condition, development of the rest of the land in the Fanole-Gelib area will not be possible without the construction of the reservoir which would give partial flood control. The amount of water taken from Fanole headworks will increase from 7.7, cumecs to 33.8 cumecs sufficient to irrigate 23,900 hectares. The main crops which will be grown in this area will be cotton, seasame, caster beans, sunflower, rice, legumes, sugar-cane, coconuts, bananas and vegetables.

The estimated total cost of the project is:

| | | |
|---|---|---|
| i. Construction of the Reservoir including auxiliary structures | So. Shs. | 80,000,000.00 |
| ii. Development of Fanole-Gelib area 23,900 ha. | „ „ | 120,000,000.00 |
| **Total:** | **So. Shs.** | **200,000,000.00** |

An estimated So. Shs. 140 million will be spent on this project during 1974-1978.

# DEVELOPMENT PROGRAMME 1974-1978

## PROJECT COSTS

SECTOR: **Agriculture**

(So. Shs.)

| Sl. No. | PROJECTS | PLANNED OUTLAY 1973-78 | 1974 | 1975 | 1976 | 1977 | 1978 |
|---|---|---|---|---|---|---|---|
| 1. | AGRICULTURAL EXTENSION SERVICE | 2,528,370 | 617,450 | 613,980 | 513,980 | 413,980 | 368,980 |
| 2. | AGRICULTURAL COOPERATIVES | 47,961,000 | 3,000,000 | 5,648,000 | 9,386,500 | 13,121,000 | 16,805,500 |
| 3. | STRENGTHENING RESEARCH | 20,078,520 | 4,860,760 | 4,148,810 | 4,635,410 | 4,425,340 | 2,008,201 |
| 4. | PLANT PROTECTION SERVICE | 20,159,800 | 3.755,400 | 6,552,800 | 5,892,800 | 2,054,400 | 1,904,400 |
| 5. | AGRO-METEOROLOGY | 982,000 | 278,800 | 240,800 | 165,800 | 158,800 | 137,800 |
| 6. | GRAIN STORAGE | 6,310,000 | 1,500,000 | 1,600,000 | 1,800,000 | 1,000,000 | 410,000 |
| 7. | FARM MACHINERY | 35,551,574 | 9,432,830 | 7,996,847 | 6,121,897 | 6,000,000 | 6,000,000 |
| 8. | RICE & PRODUCTION PROGRAMME | 8,153,000 | 3,000,000 | 2,000,000 | 1,153,000 | 1,000,000 | 1,000,000 |
| 9. | AGRICULTURAL CRASH PROGRAMME | 112,500,000 | 15,000,000 | 21,000,000 | 23,000,000 | 25,000,000 | 28,000,000 |
| 10. | PILOT FARM FOR IRRIGATED AGRICUL. | 1,924,200 | 15,215,234 | 1,143,719 | — | — | — |
| 11. | AFGOI-MORDINLE PROJECT | 16,358,933 | 641,400 | 641,400 | 641,000 | — | — |
| 12. | FANOLE IRRIGATION PROJECT | 241,961,900 | 26,681,600 | 59,314,500 | 65,184,500 | 53,656,600 | 37,124,700 |

# DEVELOPMENT PROGRAMME 1974-1978

## PROJECT COSTS

SECTOR: **Agriculture** (So. Shs.)

| Sl. No. | PROJECTS | PLANNED OUTLAY | | | | | |
|---|---|---|---|---|---|---|---|
| 13. | BALAD IRRIGATION DEVELOPMENT | 160,000,000 | 22.500,000 | 37,500,000 | 35,000,000 | 35,000,000 | 30,000,000 |
| 14. | BANANA DEVELOPMENT | 20,000,000 | 20,000,000 | — | — | — | — |
| 15. | INTEGRATED AGRICULT. DEVELOP. | 44,310,500 | — | 17,319,500 | 11,500,000 | 7,800,000 | 7,700,000 |
| 16. | GRAPEFRUIT SEEDLING MULTIPLICATION | 545,000 | 265,000 | 270,000 | 10,000 | — | — |
| 17. | GRAPEFRUIT CULTIVATION | 89,518,090 | 12,859,250 | 20,142,440 | 30,058,950 | 13,493,150 | 12,964,300 |
| 18. | DATE PLANTATION | 7,073,000 | 1,644,600 | 1,414,600 | 1,364,600 | 1,314,600 | 1,314,600 |
| 19. | SUGAR-CANE PLANTATION | 101,096,000 | 2.120,000 | 35,924,000 | 26,614,000 | 23,850,000 | 12,588,000 |
| 20. | STUDY OF SWAMP RECLAMATION | 5,400,000 | — | 1,200,000 | 600,000 | 2,400,000 | 1,200,000 |
| 21. | JOWHAR OFF-STREAM STORAGE | 35,000,000 | 2,500,000 | 8,000,000 | 8,000,000 | 8,000,000 | 8,500,000 |
| 22. | DREDGING AND CANAL DESILTING | 7,085,000 | 5,110,000 | 400,000 | 595,000 | 420,000 | 560,000 |
| 23. | BARDERE RESERVOIR | 140,000,000 | 20,000,000 | 30,000,000 | 30,000,000 | 30,000,000 | 30,000,000 |
| | **TOTAL** | **1,124,496,907** | **171,002,324** | **263,071,396** | **262,237,437** | **229,107,870** | **198,586,481** |

## DEVELOPMENT PROGRAMME 1974-1978

## PROJECT COSTS

SECTOR: Agriculture

(So. Shs.)

| Sl. No. | PROJECTS | PLANNED OUTLAY | | | | | |
|---|---|---|---|---|---|---|---|
| 13. | BALAD IRRIGATION DEVELOPMENT | 160,000,000 | 22,500,000 | 37,500,000 | 35,000,000 | 35,000,000 | 30,000,000 |
| 14. | BANANA DEVELOPMENT | 20,000,000 | 20,000,000 | — | — | — | — |
| 15. | INTEGRATED AGRICULT. DEVELOP. | 44,310,500 | — | 17,319,500 | 11,500,000 | 7,800,000 | 7,700,000 |
| 16. | GRAPEFRUIT SEEDLING MULTIPLICATION | 545,000 | 265,000 | 270,000 | 10,000 | — | — |
| 17. | GRAPEFRUIT CULTIVATION | 89,518,090 | 12,859,250 | 20,142,440 | 30,058,950 | 13,493,150 | 12,964,300 |
| 18. | DATE PLANTATION | 7,073,000 | 1,644,600 | 1,414,600 | 1,364,600 | 1,314,600 | 1,314,600 |
| 19. | SUGAR-CANE PLANTATION | 101,096,000 | 2,120,000 | 35,924,000 | 26,614,000 | 23,850,000 | 12,588,000 |
| 20. | STUDY OF SWAMP RECLAMATION | 5,400,000 | — | 1,200,000 | 600,000 | 2,400,000 | 1,200,000 |
| 21. | JOWHAR OFF-STREAM STORAGE | 35,000,000 | 2,500,000 | 8,000,000 | 8,000,000 | 8,000,000 | 8,500,000 |
| 22. | DREDGING AND CANAL DESILTING | 7,085,000 | 5,110,000 | 400,000 | 595,000 | 420,000 | 560,000 |
| 23. | BARDERE RESERVOIR | 140,000,000 | 20,000,000 | 30,000,000 | 30,000,000 | 30,000,000 | 30,000,000 |
| | **TOTAL** | **1,124,496,907** | **171,002,324** | **263,071,396** | **262,237,437** | **229,107,870** | **198,586,481** |

2. Maintain and improve, as and where necessary, adequate vegetative cover on important water-sheds so that a perennial supply of water will be available to the population dependent on these waters, making these water-sheds protective forest reserves and reforesting those areas where the cover is sub-standard at present.

3. Organise and operate research programmes which will help in finding optimum solutions for problems which inhibit implementation of projects in these fields, to find the best methods of management and utilisation of these resources and to collect and collate basic data and statistics on all these resources,

4. Organise and establish plantations in such a way to restrain the devegetation processes caused by human-beings, animals and events; to undertake reafforestation efforts to counter the progress of soil erosion and desertification.

5. Create green belts in the vicinity of major population centres which will have recreational and amenity value.

6. To establish and maintain an effective organisational machinery suitable for implementing actions necessary to achieve the objectives discussed above.

### C. **Wild Life.**

The objectives of wild life management emphasise the need for preservation of wild life resources in the country in a manner which will facilitate their continued existence both in variety and numbers. These objectives are to be achieved by creating game parks, sanctuaries and orphanages to ensure a continuous preservation of wild game within the limitations of the natural enviornment. It is also essential to make use of these resources in the best possible way for the benefit of a future generation of Somalis through creation of facilities where people can satisfy educational needs and natural curiosity as well as making aviable to the local and foreign hunters the necessary facilities to reach them in the natural habitat. The objective also visualises the need for satisfying at least on a limited scale, the demand of foreign markets for live animals without endangering the future prosperity of the animal population. The objective also gives emphasis to the need for organising studies, evaluate and implement actions necessary for the growth of usefulness and productivity of this sub-sector.

## Strategy of Development

### Range

The range areas in the country which are the basis for a thriving and developing livestock industry, at present produce at levels far below what the ecological zoning should indicate as optimum, due to deterioration through grazing. Efforts have already been made to remedy this situation through establishment of range reserves cooperatives. The five-year Development Programme will consolidate the achievements thus far made and ensure that areas within the reserve return to their original level of productivity. To achieve this improvement, works such as water spreading, gully plugging, erosion control, slope terracing, contour bunding and forage planting are planned. The capacity of the department to enlarge its activities for range land conservation and development will be strengthened through investment in a capital project which will take adavantages of assistance from UNDP/FAO in experts, equipment and availability of training facilities. Research and training centres, one in the north and the other in the south of the country, these institutions will develop research and training facilities and give exprience necessary for intensifying range development activities. The field execution will be strengthened through the expansion of range and livestock improvement associations of local livestock raisers. The association will benefit from the guidance of development officers and will work in close collaboration with the field staff of the Central Range Management Service.

## 2. FORESTRY AND WILL GAME

The strategy for the development of foresty and wild life during the five year period recognizes that activities in these fields are long-term undertakings in which the results are slow to evolve. Within these limitations technical and administrative decisions can sometimes be tentative in terms of calculable benefits. However, to make such estimates more objective, there is urgent need to establish proper technical, administrative and legal norms and formulate projects for implementation. The Development Programme, therefore, will implement a project for the intensification of the control elements relevant to forestry and wild life development.

Water and soil conservation which is an essential component of good forestry and wild life management have a special significance to the Gullis range. Many parts of this range have reached a level of deterioration where forestry activities are difficult, while there are other areas in this region where reafforestation and conservation will be easier. The Merca/Shalambot/Bufo areas in the Lower Shabelli Region face serious threat through migaratory sand dunes which are a danger to residential and agricultural areas as well as important communication facilities. Intensification action to stop deterioration of indigenous forest resources through reclamation and afforestation work will therefore be a very important strategy for action.

At present the country imports on an average So. Shs 30 million per year of wood and wood products. Even though the forests in the country may not be in a position to substitute all the imports, it has demonstrated its ability in supplying some at least of the local requirements. The work which is done in Erigabo saw mill therefore form a first step towards self-sufficiency over a period of time in the more essential wood and wood products. The strategy will also take into account the potential for producing timber in the Gelib area and other parts of the country. In general, therefore, the strategy is based on maximum regeneration facilities for areas like Gelib and other important forest areas, and the utilisation to the maximum extent of the existing forestry potential.

Both in the case of forestry and wild life, illegal action by poachers has been a continuing threat. This has taken the form of illegal felling and destruction of vegetation and poaching of wild game. The programme recognizes the need for better supervision, effective law enforcement and public education in these matters.

The range of activities to preserve the enviornment for forestry, range and wild life development is great and there is urgent need for strengthening the technical quality of the staff engaged in this task. Similar to the training and research facilities which will be established for range land conservation and development, training will be instituted for personnel working in the field of forestry and wild life. This will take the shape of a forestry school as well as fellowships for training abroad for selected number of officers.

## PROJECTS

### 1. Range Land Conservation and Development.

This project consists of two parts. The first part will be pre-project activities which will be a continuation of the earlier project, survey of Norhern Range Lands and will be completed during 1975. This first part will support the major component of the project namely the nation-wide project for range conservation and development which will continue during the whole period of 1974-1978 and will form an important activity of the Ministry of Livestock, Forestry and Range.

The project will go a long way in strengthening the present establishment of the range surveys including the training facilities required by the exsting and future personnel through the establishment of a range training and research centre in one or more of the ecological zones in Somalia.

The pre-project activity will also continue the actions initiated for range production and rehabilitation and advise the Ministry of Livestock, Forestry and Range of central development questions relating to range land production and development.

The pre-project phase will receive assistance of UNDP/FAO through experts and other personnel as well as financing for purchase or hire of machinery and equipment required for the project.

The second phase of the project which will follow the pre-project activities will continue the tasks initiated by the Survey of Northern Rangelands. It is planned that the project will:

a) Demarcate about 21,400 sq. km. of reserves and set up a system of grazing control. 220 grazing guards will be employed for the control work. 21 reserve areas have already been demarcated and are under effective control.

b) Construct stone wall terracing over nearly 14,000 ha. to slow down the run-off of rains.

c) Execute water speading and retention works through bunding and pit silting utilising 6,000 man days of work.

d) Plant forage trees over 600 ha. and maintain them.

The field execution of this project will be strengthened by the expansion of the range and livestock improvement associations which have already demonstrated their understanding of the problems and willingness to submit to regulations, to exert self restraint and participate in self-help programmes aimed at rehabilitation and development of range lands.

In addition to expatriate staff who will be financed by the UNDP/FAO, the project will employ a maximum of 12 senior officers and 179 other workers excluding the domestic staff of three attached to the Range Management School. Building for the range management school which is being established will be completed in July, 1974. It will have an annual intake of 20 students in addition to in-service trainees. The school will have at its disposal between 4,000 and 10,000 hectares of land and sufficient livestock to provide practical training. This project will be co-ordinated with the other two projects in the sector.

The total cost of the project will be So. Shs. 27.439 million of which So. Shs. 14,222 million will be an external grant.

### 2. Forestry and Wild Life Development.

The immediate objective of the project for Forestry and Wild life Development are:

a) To promote staff training at all levels;

b) To assist in coping effectively with the urgent problems of moving sand dunes and soil and water conservation.

c) To investigate the possibilities for better timber and fuel production especially the establishment of plantations with quick growing species and to improve the methods used on work already in progress with particular reference to 6000 ha. of plantations at Berbera, 6000 ha. at Gacanlibax, 200 ha. of irrigated plantations near Kismayu and 2000 ha. of protective plantations at Genale.

d) To make an inventory of the juniper forests, mangrove forests and the riverine forests along the Juba River over a total area of about 1000 km².

e) To investigate the production and marketing situation of minor forest products including francancense, myrrh, gum-arabic, tanning materials, bees-wax and honey.

f) To survey and assist in establishment of the proposed Lac Badana National Park covering nearly 14,000 km².

g) To survey the forest resources of the conutry and make recommendations for their utilisation.

h) To make recommendations for the conservation of endangered wild life species.

i) To establish forestry and wild life policy legislation and administration.

j) To ensure that forestry and wild life management are incorporated in land use plan and in particular integrated with range management.

This project is therefore mainly designed to reduce the rate at which forestry and wild life resources are being destroyed, educate the public on the importance and use of the resources, help in effecting closures of regeneration area and regenerate selected forest areas and undertake control over the threat of sand-dunes. The most important pre-condition for achieving these objectives is wide ranging mobility for the staff at the district level. The project therefore envisages the establishment of two mobile field control units, one based at Kismayu and the other at Burao and the construction of eight regional offices in addition to four district offices at Belis-Gogani, Berbera, Ganlibah and Merca.

A) **Control Units.**

The two control units will be supplied with four wheel-drive vehicles and support vehicles equipped with radio-telephones and public address system. One of the vehicles will be fitted with equipment for audio-visual education of the public. The staff on the project is expected to spend extended periods of time in the field and camping facilities will therefore be provided. Each control team will be under the charge of a forest officer who will be supported by a forest ranger, 42 guards as well as other staff. A total of 112 persons will be employed on the control programme.

B) **Regional and District Facilities :**

The Regional and District facilities will be provided through the construction of eight regional and four district offices. Each regional office will comprise 72 $m^2$ of floor space while the district offices will have 32 $m^2$ areas. The offices will need also equipment and furnishing and these costs hav been included in the total cost of the project.

### C) Training:

One of the components of the project will be the establishment of a forestry and wild life school which is expected to start functioning from June, 1974. Each year 15 students will be admitted to the school from among the junior staff of the department for a one year course as well as refresher courses for forest rangers. The project also provides for 10 fellow-ships in forestry and wild life for a total of 22 man-years of training.

In addition to the international staff of six persons, the training component will employ fifty-nine (59) local staff consisting of five senior officers, six forestry rangers, twenty-five forest guards and twenty-three others.

### D) Reafforestation:

In view of the general poor condition of forests in the country, the essential role of the forestry activities in Somalia should consist of, besides more production from existing forests, reafforestation in conjunction with anti-erosion and water-shed improvement works in order to increase water resources and limit soil erosion. Such activities should include an effective control of tree and timber felling and a ban on livestock grazing in the reserved areas. Secondly, areas denuded of all forest cover will have to be replanted in order to secure the supply of fuel and construction wood. Finally, forest planting is necessary to prevent the shifting of sand dunes in the south.

The work on reafforestation will initiate a major reafforestation programme in the country on an unprecedented magnitude. The locations of the project is based on the fact that the area in Shalambot consist of active sand-dunes which have to be checked and stablised, the Ganlibah water shed zone has to be revegetated with attention being given to soil conservation while near Berbera, otherwise unproductive land has to be put to tree plantation to yield small sized timber and fuel. In all these areas, employment will be a very important secondary objective.

In the Genale area, 1400 ha. of sand dunes will be fixed and 600 ha. of wind-breakers will be planted mainly with casurina. The target for this will be as follows:

| Activity | Total Targets | Man-Days Required |
|---|---|---|
| 1. No. of seedlings to be produced by nurseries | 10 million | 70,000 |
| 2. Opening of Pits | 2.36 million | 157,200 |
| 3. Planting | 2.36 million | 29,500 |
| 4. Replacement of losses | — | 5,900 |
| 5. Maintenance | — | 30,000 |

In Berbera, a 6000 ha. damas plantation will be established to meet local demand for fuel and timber. The targets set for this activity are:

| Activity | Total Targets | Man-Days Required |
|---|---|---|
| 1. Production of seedling | 7.2 million | 50,400 |
| 2. Land Clearing | 6000 ha. | 48,000 |
| 3. Pits | 6.0 million | 1.2 million |
| 4. Planting | 6.0 million | 75,000 |
| 5. Replacement of losses | — | 15,000 |
| 6. Watering | — | 600,000 |
| 7. Tending or maintenance | — | 90,000 |

The Ganlibah reafforestatoin and soil conservation work will consist of the following:

| Activity | Total Target | Man-Days Required |
|---|---|---|
| 1. Production of seedlings | 7.2 million | 50,000 |
| 2. Terracing | 3000 ha. | 300,000 |
| 3. Construction of check dams | — | 100,000 |
| 4. Pits | 6 million | 400,000 |
| 5. Planting | 6 million | 75,000 |
| 6. Replacement of losses | — | 15,000 |
| 7. Fencing | 24 km. | 12,000 |
| 8. Tending and Maintenance | — | 90,000 |

The annual area targets in hectares for work in the three locations during the present period of implementation are:

| **Area:** | **1973** | **1974** | **1975** | **1976** | **1977** | **1978** | **Total** |
|---|---|---|---|---|---|---|---|
| Genale | 200 | 500 | 300 | 300 | 500 | 200 | 2000 |
| Berbera | 500 | 1200 | 1300 | 1300 | 1200 | 500 | 6000 |
| Ganlibah | 300 | 1000 | 1700 | 1700 | 1000 | 300 | 6000 |
|  | **1000** | **2700** | **3300** | **3300** | **2700** | **1000** | **14000** |

During the implementation period, the project will employ nearly 3.4 million man-days of labour excluding the supervisory staff who will be attached to the project from the personnel of the Department of Forestry, Wild life and Range. This staff will also partly supervise the work of rangeland conservation and improvement. Additional provision of a total of So. Shs. 411,600 is included in this project for payment of allowances to the supervisory staff.

The total cost of the project is So. Shs. 23.715 million of which So. Shs. 7.530 million will be received as external assistance.

## SECTOR: I.B. Forestry and Wildlife: TOTAL INVESTMENT COST

(So. Shillings)

| Sl. | PROJECTS | 1974-78 | 1974 | 1975 | 1976 | 1977 | 1987 |
|---|---|---|---|---|---|---|---|
| 1. | Rangeland Conservation & Development | 27,438,448 | 7,706,021 | 8,096,163 | 5,379,095 | 4,027,263 | 2,229,906 |
| 2. | Forestry & Wildlife Development | 23,714,764 | 6,722,658 | 7,121,764 | 4,426,257 | 3,193,777 | 2,250,308 |
|  | **TOTAL** | **51,153,212** | **14,428,679** | **15,217,927** | **9,805,352** | **7,221,040** | **4,480,214** |

## IV. FISHERIES.

### Setting and Strategy of Development.

Somalia has about 3,000 km. of coastline and about 45,000 sq. km. of continental shelf.The coastline extends from the Gulf of Aden in the north and as far beyond as the equator in the south. The Somali coast has undoubtedly abundant fish riches in a wide variety of species. However, this natural endownment of the country is not fully exploited for generatnig socio-economic development.

At present, there are only abouut 2,500 full-time fishermen scattered all along the coast and another estimated 16,000 to 18,000 men who are occasionally engaged in fishing as a subsidiary economic activity. The fishing fleet deployed is nearly 2,500 small crafts which largely consist of primitive canoe type propelled by paddles, or sail; only about 2 per cent of the craft is motorised. The average annual catch is around 5,000 tons with large annual and seasonal fluctuations. In contrast, the potential fish resources along the Somali coast is roughly estimated at 200,000 to 750,000 tons per annum. Because of the low level of technology applied in exploiting fisheries resources coupled with the low purchasing power and the absence of fish eating habits among the Somali people, fish pruduction was kept far below the potential resources and thereby fishing in Somalia remained a subsistance economic activity in which commercial operations were confined to the vicinity of unloading points.

The principal constraints against fisheries development are:

i) Lack of modern fishing gear, motorised boats and other suitable vessels and trained crew for maximum exploitation of the sea.

ii) Poor processing methods as there is inadequate freezing capacity to preserve fish catch until such time it is locally consumed or exported to foreign markets.

iii) The difficulty of marketing fish catch due to the poor road system between the isolated coastal areas and the hinterland. This fact, hinders, if not prevents efficient distribution of the landed catches.

iv) General unsuitablitiy of the coastline in providing at a reasonable cost the necessary secure harbours and landing places; and finally.

2. To change the socio-economic relationship of the people in general and the fishing community in particular by increasing the income levels of the poor.
3. To create employment opportunities for the greatest possible number of people.
4. To expand exports of fish and fish by-products so as to earn more foreign exchange for financing imports of capital goods needed for the development of the country.
5. To increase the role of fish as a nutritional supplement to the traditional food consumption pattern.

The traditional pattern of food consumption in Somalia is deficient according to the results of the limited number of nutritional surveys conducted in the country. It is now recognized that fish and fish products are important potential sources of protein which have been extensively used to nutritive protein food to the people, especially children in developing countries. It is also further recognized that among the various kinds of animal protein, fish is nutritionally superior compared to meat. From this point of view, there is a great need to encourage Somali people to consume more fish and in that process reduce the burden of an increasing demand on the meat supply in the country. Both meat and fish are potentially exportable commodities and thus if the diet of the people can be made flexible in terms of consumption pattern between meat and fish, the possibility of maximum exploitation of potential markets will be greater. The objective of emphasising fish as an element of food for the whole population is therefore based both on dietic advantages as well as commercial considerations. Arising from the earlier objective, there is an urgent need of maximising exploitation of the fishery resources in the country. This requirement is in turn based on the fact that there is a continuing increase in the demand for fish and fish byproducts in the international markets. Any quantity of fish production by Somalia could be marketed profitably. In view of the fact that the present level of production is infinitely small compared to the potential resources, programmes of economic development for the country as a whole view resources development in the fishery sector as an engine of growth.

In terms of employment and income the development of the sector poses challeinging potentialities for creating greater levels of prosperity for a large number of people. The objective of maximising employment in the sector is not, therefore, inconsistent with any programme of modernisation of technology in fishing, in processing and marketing.

The strategy for realizing the policy objectives of the Development Programme will be:

### 1. Promotion of Deep Sea Fishing.

Proper exploitation of the fishery resources could be achieved by establishing a national coastal fleet, strengthening the operations of the Somali-Soviet Expedition and also initiating a policy whereby the Government will enter into joint-venture agreements with foreign firms in order to induce the flow of capital investment into the fisheries sector for speedy development.

### 2. Expansion of Fisheries Development Centres.

During the Programme period it is envisaged that about 21 cooperative centres will be organised in the most strategic places along the coast. The prime objectives of increasing the number of cooperative centres in various geographical areas is to increase fish production in the country within the shortest possible time and secondly to raise the standard of living of the fishing community and thereby change their socio-economic relationship. In the process of cooperative development the Government will play a very effective role by providing to the cooperative centres (a) basic infrastructure like offices, curing sections, freezing plants and training of the fishermen in application of modern techniques of fishing, (b) provision of extension services to the centres in organising and helping in the accounting systems of the centres and popularisation of the cooperative movement in pooling resources as a superior form of increasing fish production. Certain important inputs such as fishing gear and the motorisation of the present craft will be given to the fishermen either on loan or on hire-purchase; and (c) the UNDP/FAO assisted project will be involved in cooperative development through training of fishermen, demonstration of improved methods of fishing and provision of equipment to the centres.

### 3. Restructuring the Processing Capacities of the Fish Factories.

Through the creation of adequate demand for the increased fish production by the cooperatives and the large fishing units, the excess capacity of the existing canneries will be eliminated, and additionally a modern canning section will be established in Bolimog freezing plant.

### 4. Enlargement of the Freezing Capacity.

Three large freezer plants will be installed in appropriate places along the coast. This will enable the landed catch to be preserved until it is despatched to consuming centres or exported.

### 5. Construction of Fishing harbours.

Fishing harbours with repair and maintenance workshops for crafts and fishing gear will facilitate fish production at increased levels. During the five-years Development Programme period, three fishing harbours will be constructed.

### 6. Fishermen Training Programme.

The Mogadishu Marine Training institute will be enlarged and the syllabus of the Institute will be modified both in content and method in order to meet the needs of the local fishermen and produce the future leadership for fisheries development and the required middle level marine and fishery technicians. Moreover, another fishermen's vocational institute for training ordinary fishermen will be established in the north.

During the five-year Programme period, output of the fisheries sector is expected to increase eight folds at least and thus a target of 40,000 tons per annum will be reached when most of the projects are fully implemented by 1978. To generate a matching demand with the increased production, effective and timely policy measures will be adopted so that fish consumption habit among the public will be encouraged. Improvement of the transport system between the coastal areas and the hinterland, installation of refrigerated stores in most of the urban and semi-urban areas and popularisation of fish eating habits among the public through national campaigns will be the means used to implement the policy. Further, it is anticipated that the fish canneries will attain their full processing capacity and thereby absorb 19,400 tons. The rest of the expected output will be utilised for direct local consumption and export.

On the supply side, the national fleet will catch 20,000 tons of fish per year. Of this total the Soviet-Somali Expedition is to catch 4,770 tons to 5,000 tons. The remaining 15,000 tons is expected to be supplied by the cooperatives, the joint-ventures and the private individual fishermen. The total investment required averages So. Shs. 2,500 per ton of fish. The average value added for raw fish would be So. Shs. 1,500 per ton, and for processed fish So. Shs. 2,500 per ton. Development of fisheries and fish based industry will yield a value added of about So. Shs. 6.5 million per anum. The employment compenent of the target would be 4 to 5 persons for a 10 tons catch. Investment in the fisheries sector is, therefore, labour-intensive and attracts high priority rating in view of the Government policy of creating employment opportunity in the country.

Besides the above considerations, FAO studies forecast that the world demand for fish and fish by-products will increase 40% from its present level by 1980; that is at a compound rate of 3.3% per annum. It can safely be inferred that any amount of fish produced by Somalia will find a market at a profitable price. Hence, increased investment in the fisheries sector is very promising insofar as it will raise the consumption levels of the people, add to the nutritional level and augment the foreign exchange earning capacity of the economy. However, it is very important to note that expanded fish production will in no way impede development of livestock production. In fact, the two sectors constitute a complementary whole in the effort of accelerating the socio-economic progress in the country.

## Projects

In line with the objectives and strategy set for fisheries development and also taking into account the financial and adminsitrative constraints, the Development Programme 1974-1978 proposes a total outlay of So. Shs. 109.69 million in the fisheries sector. This amount will be allocated among the following projects:

### 1. Development of Cooperative Centres.

The basic objective of establishing a fishermen's cooperative movement in the country is to introduce fundamental change in the mode of fish production by raising the level of output, improving the quality of fish catch and finally improving the economic status of the fishermen.

It is planned to establish 16 cooperative centres in the most potential areas along the coastline. Five centres are already established in 1972-1973 as the first phase of developing cooperative centres in the country They are located in Adale, Mogadishu, Kismayu, Merca, and Berbera. The 16 new cooperative centres will be fully operational by

v) Lack of proper extension services and adequate water to meet the needs of the fishermen in their day to day operations.

Before the 21st October Revolution there had not been any long-term objectives and significant national policy for fisheries industry. Hence, development of fisheries was not given the recognition which the resources potential of the sector deserved in relation to the overall development of the country. Investment made prior to the 1971-1973 Development Programme was, therefore, limited to the establishment of one large processing cannery in the public sector and three freezing plants in the private sector. However, all the three factories worked far below their capacity mainly because of the shortage of fish supplies throughout the year. Even in the Development Programme 1971-1973, investment was geared mainly to conduct a fisheries resource survey. Fisheries surveys were, however, not supplemented by quick follow-up action in order to exploit the results of the survey, especially in organising, and equipping fishing on a large scale. Similarly, creation of the fish industries was not matched by organisation of the fishermen and fishing operations for supplying the material requirements of the factories. The achievement made by the fisheries sector during the period of the Programme 1971-1973 is confined to:

1. The establishment of five cooperatives centres, namely at Adale, Merca, Mogadishu, Kismayu and Berbera.
2. The creation o the Soviet-Somali expedition for the purpose of developing deep sea fishing and achieving large scale fisheries production.
3. Restructuring of Laskoreh Fish Cannery and reactivation of Bolimog freezer plant after the disruption by the cyclone.
4. Extension of the UNDP/FAO assisted Fisheries Survey Project in January 1971 for another two and half years in order to give technical and equipment assistance to the fishermen cooperative centres being established or planned.

In the five-year Development Programme, the objectives for developing the fisheries sector are based on the following considerations:

1. To maximise output and gross income from the national point of view.

the end of 1974. Moreover, it is foreseen that these 21 centres will adequately cover all the possible areas for cooperative development. Cooperative centres of Brava, Zeila, Alula, Candala and Laskoreh are expected to be completed in the first quarter of 1974.

Of the total So. Shs. 7 million development expendtiure required by the new centres, So. Shs. 3 million will be contributed by the Government on grant basis and So. Shs. 4 million will be on loan. Furthermore, food assistance worth So. Shs. 6.2 million will be provided to the centres. The total membership of the cooperatives will be 1,500 to 2,000. In the initial stage of the cooperative development, the Ministry of Fisheries and Sea Transport will supervise the organisation and management of the cooperatives and provide to each cooperative the necessary basic infrastructure and administrators who will guide the general administration and the mobilisation of work. The UNDP/FAO Project will be involved in extensoin service to the cooperatives. It will demonstrate to the centres modern techniques of fishing and new fishing boats and gear and will give on-the-job-training to the fishemen.

The total cost of the project is So. Shs. 13.2 million.

## 2. **National Coastal Fleet**.

In the fisheries development scheme a national coastal fleet will contribute a lot in increasing the volume of production and quality of the catch. It is, therefore, planned to establish a coastal fleet comprising of 250 motor boats costing So. Shs. 25 million and 10 vessels of 25 to 30 tons capacity costing So. Shs. 15 million. Organizationally, the bulk of the motor boats will be attached to the canneries which will be responsible for their safe custody and minor repairs. It is expected that 80% of the boats will be constructed locally and the rest of the motor boats will be either purchased on long-term credit by the cooperatives or will be on hire. The total manpower required for the motor-boats will be around 750 men on board and another 100 men for engine and body repairs of the boats. The required manpower will come from the factories and from the coperatives. The catches will be divided equally between the Ministry and the fishermen on board each motor boat. The administration of the 10 fishing vessels will be exclusively under the Ministry of Fisheries and Sea Transport. The estimated manpower required for their operation is about 200 men.

The whole project will be implemented in a phased manner during the Programme period, and it is expected to be fully operational by 1978.

The total cost of the project will be So. Shs. 40.0 million.

### 3. Construction of Fishing harbours.

In order to facilitate the overall fisheries activity, the construction of three fish harbours is included in the programme. The estimated initial capital outlay is So. Shs. 3 million for each harbour. The harbours will be constructed in Mogadishu, Alula and Eil. All the three harbours are expected to be fully operational by 1979.

### 4. Freezer Plants.

The establishment of three freezer plants of the capacity of 150 to 200 tons is included in the Development Programme. The implementation of the project will be in two phases, i.e. the first two plants requiring a capital outlay of So. Shs. 4 million will be installed in 1975, and the third plant costing So. Shs. 2 million will be constructed in 1976.

The location of the plants are tentatively selected for Mogadishu, Berbera and Eil. The factors taken into acccount in selection of the three sites are the number of fishermen in the area, the volume of the expected catch and the period required for preservation of the catch until such time it is finally exported to the consuming centres. However, the final decision of the exact location awaits a final survey in order to identify the most appropriate sites for the plants.

The justification of this is based on the felt need of having adequate freezer plant capacity along the coast in order to preserve fish catch until it is despatched to the processing canneries and the consuming centres.

The total cost of the project will be So. Shs. 6.0 million.

### 5. FAO/Fisheries Survey Project.

The UNDP/FAO assisted Fisheries Survey Project became operational in May 1969 with a budget of So. Shs. 4.0 million. The original purpose of the project was to assist the Somali Government in carrying out a fisheries resources survey based on existing data and supplemented by exploratory fishing within the waters of the Somali coast. At the request of the Somali Government, this project was extended in June 1971 for another two and half years and the UNDP made an additional contribution of So. Shs. 2.4 million; So. Shs. 1.4 million for 1972 and 1.0 million for 1973. During the period the project was in operation it introduced modern techniques of fishing, established a pilot fish curing yard and gave on-the-job-training to a large number of ordinary fishermen.

The present agreement on this project terminates on 30 December, 1973, but it is planned to be continued with the UNDP contributing to fisheries development So. Shs. 4.29 million in the form of technical assistance and equipment during the period 1974-1976. The Somali Government will make an annual contribution of So. Shs. 1 million. The new project is planned to go into a more practical development phase based on the experience of the on-going project. During the Programme period, the objectives of the project will be:

i) To give technical assistance and equipment to the fisheries development centres and the fishermen's cooperatives which are being established and planned.

ii) To establish a pilot marketing system for promotion of domestic consumption and quality control facilities for the export trade.

iii) To conduct site selection survey and plan fishing harbours and/or fish terminals in high priority areas.

iv) To design and establish small scale boat-building yards and servicing facilities in two or three places.

v) To establish a mobile type of vocational training unit for fishermen's cooperative members.

vi) To train fisheries technicians and extension workers.

The total cost of the project will be So. Shs. 7.29 million.

### 6. Fishermen Training School.

The yearly output of Fisheries and Marine Training School in Mogadishu is not adequate to meet the manpower requirement for developing the fisheries sector. The Development Programme, therefore, evisages the establishment of a new fishermen training school preferably at Bosasso. The role and functions of this school will be to give short courses to the ordinary fishermen so as to enable them to be acquainted with modern fishing techniques. The ordinary fishermen can improve their efficiency and be able to operate effectively the proposed national fleet and other related maritime activity only after they are trained in modern methods of fish catching and production. This institute is tentatively planned to be completed in 1977.

The total cost of the project will be So. Shs. 1 million.

### 7. Repair Base for the Fishing Fleet.

There is a great need for having a repair and maintenance workshop for repairing the fishing vessels in the country. Therefore, a project to effect this is expected to be established in 1975 in line with Soviet-Somali agreement of 1972. The repair workshop will be based in Berbera because of the advantages already existing there and the fact that vessels will be regularly sheltered in that harbour during lay-off periods of the Gulf of fishing season. The estimated outlay is So. Shs. 1.5 million and it is expected to go into operation in 1976.

The total cost of the project will be So. Shs. 1.5 milloin.

The following fisheries projects accounting for So. Shs. 31.7 million of the total investment outlay of the fisheries sector which will be executed by the Ministry of Fisheries and Sea Transport, but are included in the Industry and Education sectors for consistency are discussed in those sectors.

8) Restructuring Laskoreh Processing Cannery.

9) Boat Building Yards.

11) Fishing Gear Plant.

12) Marine and Fisheries Training Institute.

## SECTOR: Fisheries — TOTAL INVESTMENT COST

(So. Shs. '0008)

| Sl. No. | PROJECTS | 1974-78 | 1974 | 1975 | 1976 | 1977 | 1978 |
|---|---|---|---|---|---|---|---|
| 1. | Development Centres | 13,200 | 8,200 | 2,000 | 3,000 | — | — |
| 2. | Coastal Fleet | 40,000 | — | 10,000 | 10,000 | 10,000 | 10,000 |
| 3. | Fish harbours | 9,000 | — | — | 3,000 | 3,000 | 3,000 |
| 4. | Freezer plants | 6,000 | — | 4,000 | 2,000 | — | — |
| 5. | Fisheries Survey Project | 7,290 | 2,430 | 2,430 | 2,430 | — | — |
| 6. | Fishermen Training School | 1,000 | — | — | 800 | 200 | — |
| 7. | Repair | — | — | 1,500 | — | — | — |
|  | **TOTAL** | 77,990 | 10,630 | 19,930 | 21,230 | 13,200 | 13,000 |

## V. WATER RESOURCES DEVELOPMENT

### The Setting:

The climatic characteristics and economic mainstay of the country add special significance to water development. With a rural economy, water resources is crucial for the survival of human and livestock and for agricultural development. A measure of the demand for water in the rural areas is taken as the density of the livestock population expressed in terms of animal units per thousand square kilometers and the size of the settled population. These two factors dictate the number of water points required. In the absence of livestock and population census and complete knowledge of the pattern of movement of the nomadic population, the determination of location of water points is carried out on less scientific basis and on the basis of approximation.

The demand for water in the range lands is by far the largest and is growing at a substantial rate. Livestock is often driven for long distances away from areas where pasture is plentiful in search for water. This practice leads to emaciation of animals and great human sufferings. The limited intervention of government or the private sector in water development more often leads to great imbalance. In some areas water harvesting is carried out too extensively to the detriment of ranges by disturbing the delicate ecological balance between livestock population, water points and grazing potential, while in other areas complete absence of water resources development inhibits the full exploitation of grazing resources. Such an imbalance can only be rectified by extensive research and knowledge of the behaviour of the nomad and the potentialities of the various ecological zones of the country. The livestock and population census which will be carried out in 1975 will constitute the first basic study for more scientific determination of water points. Another basic study which will supplement the livestock census is a complete survey of the range resources and the carrying capacity of the ecological zones. The range management project will deal with this aspect of the question in a more exhaustive nature.

The requirements of water can be met by extensive exploitation of ground-water resources and by mobilising the run-off water by collecting and storing it in strategic points in the water courses. Artificial catchments such as dams, ballies and wars can be considered as important means for providing water in areas of good rainfall and extensive catchment.

It is cheaper to develop and maintain surface water points than underground water which because of excessive depth of the water table and high maintenance costs calls for larger investments and availabilitiy of extensive logistics to run them efficiently.

It is difficult to estimate precisely the amount of water required for domestic and industrial uses of water in urban centres because of lack of accurate demographic statistics and data on water consumption. Per capita water consumption in settled areas is probably low, but it should rise quickly as the standard of living of the people increases and more and better quality of water is made available. In most urban areas water is obtained from numerous shallow wells indiscriminately dug in the centre of urban settlements with consequential hazards to health. A major handicap in the development of potable water supply is that a purification and distributing plant cannot be financed by/most of the townships and would require substantial subsidy by the central government. At present Mogadishu, Hargeisa, Kismayu and Berbera have major urban water supply systems. The rest of the cities and townships in the country depend on scattered wells with unsatisfactory output. Because of the rapid rate of urbanisation, Mogadishu's system is rendered inadquate before the new system has been operationally commissioned. Berbera's system is old and insufficient for domestic, livestock and bunkering requirements for water and has to be enlarged and modernized.

### The Strategy for Water Resources Development.

The long term objective in the development of water resources is the provision of adequate, reliable and safe water for domestic, livestock, agricultural and industrial uses throughout the country at modest prices so that the facilities could be within easy reach of all potential users.

To achieve this basic objective, the Development Programme envisages strengthening the Water Development Agency through supply of adequate machinery and high level technical personnel. The local governments' staff for water resources will be fully trained to increase their efficiency and enhance their workmanship. In urban areas investments of So. Shs. 46.862 million will be made for the extension of Mogadishu water supply and the development of water supplies in Berbera, Gardo, Bosasso, Beletwein, Burao, Baidoa, Galkayo, Garowe, Dusa-Mareb, Bulo-Burti, Jowhar, Shalambot, Hudur, Erigabo and Garbahary.

In rural areas, the problem of water supply is intricately related to the ecological system comprising water, grazing and the productive capacity of the range lands. The balancing of these factors is of crucial importance and government intervention in this sub-sector must be carefully reviewed and all programmes carried out by different organs completely synchornised for effective utilisation of water and range resources. In the Development Programme 1974-78, a total investment of So. Shs. 68,2 million will be made to develop 200 wells and 70 large water basins, 750 wars and 150 shallow wells. A further So. Shs. 127.99 million will be invested for procurement of essential equipment and machinery and research.

## Rural Water Supply.

Water shortage is most acute in the regions that support the bulk of the country's livestock population. The provision of adequate water is of crucial importance to lives of the nomadic population and their animals. Equally important is the need to spread the water structures more evenly so that balanced grazing is ensured. As in earlier programmes, the government views the field of water development as one of the few areas where any level of investment could be economically and socially justified. As the resources of the central government is limited, the participation of local government and the people in general in the campaign against thirst is anticipated .

### (i) Deep and Basins:

During the programme period, 300 deep wells and 100 water basins will be constructed.

Because of the migratory nature of the nomadic population these facilities may not be fully utilised all the year round. The large number of human and livestock population which this investment would satisfy has to be viewed with in this basic limitation.

The construction programme for deep wells and the basins may vary in implementation from one region to another. Geological and geophysical structures of different areas will dictate whether surface or underground water may be tapped in any particular area. Hence the water development programme will be flexible enough to give the Water Development Agen cy sufficient latitude to balance different structures of watering points as would be required by the geological conditions of the areas concerned.

(ii) **Wars and Shallow Wells:**

A project which will be implemented by the Department of Community Development and Social Welfare in the Ministry of Interior has the primary aim of constructing small sized cement tank wars and shallow wells in remote areas and settlements where there is an acute shortage of water. Since the financial resources of this programme is dependent partially upon the contributions of World Food Programme, its gestation period is limited only to the three years for which a contract is signed.

In the three-year Development Programme (1971-1973), it was envisaged to construct 1500 cement tank «wars», at the rate of 500 «wars» per year. However, only about 350 cement tanks are constructed so far, and 4 big wars are expected to be completed by the end of 1973. The Water Development Agency will undertake the construction of the «wars» at the estimated total cost of So. Shs. 900,000 contributed by the Ministry of Interior. The remaining 750 cement tanks and another 150 shallow wells are programmed now to be constructed during the three year 1974-1976. It is estimated that the project will cost a total So. Shs. 7,950,000 of which the World Food Programme will contribute about So. Shs. 2,064,000 in the form of food aid in the three year period. The Central Government will contribute So. Shs. 900,000 at the average of So. Shs. 1,000 per war and shallow well constructed. The remaining So. Shs. 4,986,000 will be contributed by the public and local government bodies.

The justification of this project is based on the consideration that it will be supplementary to the rural water supply project and will augment the effort made in the five-year Development Programme to provide adequate water supply both for humans and animals.

The locations of the watering points which will be constructed in the rural areas during the programme period will be determined in coordination with the project for range development. In the early part of 1974 designated areas for water development will first be stablished.

This will ensure that the location of water point will be consistent with the ecological balance among nature, human beings and animals.

The administration of water development in the country has been organised in a manner consistent with the technical advantages of centralisation and the administrative convenience of decentralisation. In the case of urban water systems, the responsibilities for administration, management and mainenance will be with the municipal bodies. For rural water supply, the overall administration will be under the control of the local government bodies who will determine from time to time the policy for distribution of water under the overal terms of the Water Law. The range administration which will also eventually be the responsibility of the local government will be closely associated with water management.

The responsibility of the central organ will be for overall planning of water development and in planning, designing and installations of the water installation in the country. This will enable economy in operations and standardisation of equipments and material which will be used in water development projects.

## URBAN WATER SUPPLY

(a) **Mogadishu Water Project:** During the Three-Year Development Programme period the Mogadishu Water Project was completed at a total cost of So. Shs. 53,794,000. The project included the design and construction of new groundwater supply from 20 wells drilled in the outskirts of the city along the Mogadishu-Balad road and a water distribution system which consists of about 100 km. of piping, 122 public fountains, 2 vendor water points, about 5,000 service connections and 2 reservoirs 6 million gallons capacity. Although this project is in full operation now and the major part of Mogadishu city gets fresh groundwater supply, it will not be sufficient to meet the need of the city within the next few years in view of the rapid population growth. Hence, the five-year Development Programme envisages the extension of the Mogadishu Wata Project through the construction of 10 new wells with pumps and engines of 250-300 gpm capacity, two generators, transmission lines and transformers. On the distribution side, it will include the construction of a concrete reservoir of 3.6 million gallons capacity, booster pumping station with telemetry system, cholorination building, equipment and piping. It will also include one truck filling station and 50 public fountains. The estimated cost of the extension project is So. Shs. 35.0 million. After the completion of this project, the whole scheme will be capable of meeting the projected water demand of the city upto 1985 (9.6 million gallos per day). The Mogadishu Water Supply and the Local Government will finance the project.

(b) **Berbera Water Supply:** The present water supply in Berbera is obtained from Dubar, about 7 miles from the city. The output of the system is 150,000 to 170,000 gallons a day. Taking into account the various water users such as livestock which consist of about 1,600,000 sheep and goats, 26,000 camels and 70,000 cattle for export, a human population of 20,000 and the bunkering requirements for ships calling at Berbera, the demand for water is approximately 600,000 gallons a day.

As the present supply of Dubar is at its maximum output, a supplementary source of supply has to be developed to meet the deficit which is assuming an emergency nature. Just 9 miles to the east of Berbera is the stream of Biyo Gure with an estimated flow of over 600,000 gallons a day. It is proposed to divert the Biyo Gure water to Berbera by a pumping system, comprising water intake, collection chamber, pumping set, transmission line to Berbera and additional storage capacity. The total cost of the project is So. Shs. 2,362,000. The Berbera Local Government will finance the project.

(d) **Other Urban Centres:** Survey work is going on in Beletwein, Baidoa, Galkayo, Gardo and Bosasso to develop adequate groundwater supplies and sufficient distribution systems. In each town, the investment will finance water survey, installation of pump stations, water tanks, distribution works and other essential services. So. Shs. 2.5 million is earmarked for the development of these systems.

For other urban centres, Garowe, Dusa-Mareb, Bulo-Burti, Jowhar, Shalambot, Hudur, Garbahary and Erigabo So. Shs. 2.4 million is provided for construction of wells as well as purchase and installation of motors and pumps, water tanks and pipes. All these investments will be financed by the Local Governments concerned. The Water Development agency will submit to each authority complete documents on water development during the first six months of 1974.

(e) **Water Equipment and Research:** The Water Development Agency has to be given adequate machinery and equipment to carry out the water development programme. The present machinery is insufficient and for the most part ineffective to enable the Agency to play its role efficiently. It is therefore the intention of the government to allocate sufficient resources to equip the technical unit. The groundwater section of the Ministry of Mining will be brought under the direction and management of the Water Agency. So. Shs. 16,000,000 will be invested in equipment and distributed among the regions. Research and studies into the problems of water resources development in the light of the specified ecological conditions in Somalia is important and the programme envisages coordination and systematisation of activities by different Ministries and Autonomous Agencies which have a concern with these problems. In this context research and studies will continually be made for maximising supply of water for human and animals as well as the various enterprises, consistent with the need for preserving the ecological balance which is vital for sustained development.

The census of population and livestock which will be conducted during 1975 will be basic to future planning of water resources development since it will identify the water requirements in terms of location and intensity. It will also supply detailed information on watering points normally used by the nomadic population and will substantially increase the present state of knowledge regarding existing water resources.

Survey of groundwater resources has been continuing in the country in the various regions. Underground water test drilling operations for 23 wells will continue during 1974 and this programme will further be strengthened by another 144 new operations to be undertaken between 1974 and 1976. This project involves an investment of So. Shs. 1.0 million. There has also been some preliminary studies into the potentialities of tugs and such other natural sources of water. During the Programme period these works will need to be intensified both in volume and intensity. Test drillings will continue both in search of water and minerals. Information on potential supply of water obtained from these and other sources will be collated with other studies on water resources done in connection with projects for range management and conservation, agro-meteorology, agriculture and livestock development and irrigation projects.

Research and studies on water resources in the country will also be devoted towards discovering practical and economic means of conserving and using water resources. This will also lead to intensified studies into possibilities of using sources of power like the wind, sun and other locally available fuel for pumping and for desalination where this is essential.

## PHYSICAL PROGRAMME OF RURAL WATER SUPPLY

| | 1974 | 1975 | 1976 | 1977 | 1978 | Total |
|---|---|---|---|---|---|---|
| Wells | 25 | 35 | 40 | 45 | 55 | 200 |
| Basins | 6 | 10 | 14 | 20 | 30 | 70 |
| Wars | 250 | 250 | 250 | | | 750 |
| Shallow wells | 50 | 50 | 50 | | | 150 |
| | **331** | **335** | **354** | **65** | **85** | **1170** |

## INVESTMENT

| | | | | | | |
|---|---|---|---|---|---|---|
| Wells | 4,031,250 | 5,643,750 | 6,450,000 | 7,256,250 | 8,868,750 | 32,250,000 |
| Zasin | 2,100,000 | 3,500,000 | 4,900,000 | 7,000,000 | 10,500,000 | 28,000,000 |
| Wars and shallow wells | 2,650,000 | 2,650,000 | 2,650,000 | — | — | 7,950,000 |
| **Total** | **8,781,250** | **11,793,750** | **14,000,000** | **14,256,250** | **19,368,750** | **68,200,000** |

| **Project** | **1974** | **1975** | **1976** | **1977** | **1978** | **Total** |
|---|---|---|---|---|---|---|
| 1. Mogadiscio | — | 10,000,000 | 15,000,000 | 10,000,000 | — | 35,000,000 |
| 2. Berbera | 1,000,000 | 1,362,000 | — | — | — | 2,362,000 |
| 3. Burao | — | 1,100,000 | — | — | — | 1,100,000 |
| 4. Other urban | — | 800,000 | 1,500,000 | 1,500,000 | 1,100,000 | 4,900,000 |
| **Total urban water spply** | **1,000,000** | **13,262,000** | **16,500,000** | **11,500,000** | **1,100,000** | **43,362,000** |
| Equipment | 9,000,000 | 7,000,000 | — | — | — | 16,000,000 |
| Research | 2,790,000 | 9,200,000 | — | — | — | 11,990,000 |
| **Total** | **11,790,000** | **16,200,000** | — | — | — | **27,990,000** |
| **Grand Total** | **21,571,250** | **41,255,750** | **30,500,000** | **25,756,250** | **20,468,750** | **139,552,000** |

### VI. **Mining.**

Systematic surveys of the mineral resources in the country were begun in 1964 by the Mineral and Ground Water Survey which has been purely exploratory in nature. The important mineral deposits covered by the survey are the uranium, iron ore and quartz deposits. Preliminary studies indicate considerable deposits but not sufficient for commercial exploitation. In the meantime, surveys have continued in prospecting for minerals, more specifically the prospectnig for and evaluation of the piezo-quartz, manganese, tin and other deposits as well as uranium-vandium ores and geological investigation on prospecting for uranium and other mineral deposits and reconnaisance geochemical invesigations of the pre-cambrian outcrops in the country.

The geological and geophysical work carried out in the Mudug radioactive province shows that throughout the area there are outcrops of the ore bearing formation which are between 20 and 30 meters thick covered by clayey gypsum. The area covering Mirig, Wabo, Bulale, Hamour and the adjoining area of Dusamarab and Wamoley appear to have the greatest economic potential. Among the radio-active anomaly in the Bur Region, the most important is the Alio-Gelle anomaly. The investigation of the uranium deposit in this area was continued intensively by «Nucleare Somala». The report of the investigation which is still inconclusive shows that although a large deposit of uranium ore has been ascertained, it is not possible at present to exploit the deposit taking into account the present condition of the uranium market in the world.

Tin was mined in Somalia during the period of Italian occupation in Majayahan near Bosasso. However, these mines were abandoned during the period of the Second World War. The government decided to reactivate the old mines and to further undertake investigations aimed at discovering more tin deposits. Survey in this field conducted recently through bilateral assistance has shown promises of economic viability in exploitation of tin deposits. The Dahahan-Majayahan project whose main traget is the exploration and mining of tin is also charged with the task of investigating for other minerals within the area of tin mineralisation such as copper, silver, antimony, lead etc. Geological exploration in this area is being completed and the machinery and equipment for mining and ore-dressing are already installed.

The piezo-electric quartz discovered by the Mineral and Ground Water Project in the interior areas of the Northern Regions showed that the origin of the quartz bearing veins and the quality of the crystals themselves differ widely in each area. Geological samples tested were classified as extra grade. Thrøugh a bilateral agreement, a complex prospecting work with the aim of evaluating the piezo-optical raw material is being carried out. It has been reported that the area covering piezo-quartz mineralisation exceeds 2500 sq.km. Favourable geological conditions suggest that the area which is under investigation shows promises of new piezo-optical deposits.

At present four oil companies are operating in the country while a number of new foreign oil companies have applied for the grant of oil concessions. The field of oil exploration is a very expensive task and therefore exploration as well as exploitation will need to be done at the moment on the basis of collaboration with external finance agencies. Although oil has not been discovered till now, gas showings had been encountered in a number of wells which indicate that the process of nafta-genesis really took place in the country. Favourable geological conditions for oil discovery have been reported to exist in large areas of the country. These favourable conditions justify the continuing interest that foreign oil companies are showing for grant of oil concessions.

Oil exploration in the country is subject to control of the Ministry of Mining and Water Resources and to fulfill this important task a separate section is being established within the general structure of the Geological Department. The Department. The Geological Department excercises proper control over the exploration work through the examination and study of the quality of the geological materials and reports submitted periodically by the oil companies to the Ministry in accordance with the existing mining law, the control of the techniques and methods of geological investigations exploited by the companies to determine whether they are the most efficient techniques and methods, the control and evaluation of the volume of work carried out and the control of the general activities and programmes to ensure that they comply with the provisions of the existing mining code.

The Mineral and Ground Water Survey Project has been instrumental in giving field training to Somali geologists and other technicians. This training has therefore prepared the local personnel for taking on future work with only marginal technical assistance from abroad. The time is therefore appropriate for the establishment of a Geological Survey of Somalia.

**Strategy for Development 1974-1978.**

The 1971-1973 Programme has already elaborated a strategy for development in the field of mining. Basically the same strategy continues to be relevant for the period of the new Development Programme. The fundamental approach in this strategy is the continuation of the exploration and surveys of metalic and non-metalic occurrences in the country as well as prospecting for oil and natural gases. This strategy also visualize quick actoin in converting potential resources to commercially viable mining projects. Further evaluation of the already known deposits of minerals will be taken up. The development programme consist of projects for the commercial exploration of the larger geological deposits in the Northern Region. It is also hoped that iron ore deposit will be re-assessed of its potential for small scale operation and if possible exploited during the period of the Programme.

Survey and exploration will continue during the programme period under the auspieces of the Geological Survey of Somalia which will come into operation at the end of the present phase of the Mineral and Ground Water Survey in 1974. The geological survey teams will carry on investigations already conducted and evolve strategy for quick exploitation of any economic deposits. For this purpose, the coordination machinery in the Government among the Ministries of Mining, Industry and Trade will be strengthened.

**Projects:**

1. **Mineral and Ground Water Survey.**

The Mineral Survey Project will continue until March 1974 in carrying forward the work which has been already initiated. Organisationally the mineral survey work will be separated from the survey of water resources in order to enable future work to be better defined when th Geological Survey of Somalia takes over the implementation of projects for mining. A provision of So. Shs. 1.683 million is included in 1974 for expenditure on this project.

2. **The National Geological Survey.**

Beginning from 1974 till the end of the Programme period, the National Geological Survey will implement a project consisting of geological mapping, investigation, location of deposits, mineralogical and chemical studies of ores, feasibility studies and drilling geological and hydro-geological holes and trenches, and exploration and evaluation of different occurrences. Additionally the project will also undertake national training courses, as well as fellowships, seminars and national conferences.

The project will also build workshop facilities for the Ministry in Mogadishu to do major servicing to equipments and vehicles used in survey work.

Two survey parties will be assigned to the Upper Juba area for geological mapping, exploration and evaluation of different occurrences. Mineral resources and chemical studies of samples collected by this team will be done in the Central Laboratory in Mogadishu.

Two other parties will operate in the Northern provinces doing geological mapping, checking the geo-chemical data, exploration and evaluation of different ore occurences and their mineral and chemical investigations as well as drilling of geological holes and work on trenches.

A separate party will carry out detailed geological and technical investigations for building materials such as:

**Asbestos**
Area : Hargeisa, Bohol, Mora, Bana

**Potassium Feldspar, quartz and quartz sands, nefeline syenite**
Area : Berbera, Hargeisa

**Kaoline, Bentonite**
Area : Dusa-Mareb, Berbera

**Vermiculite**
Area : Burqalan ridge, NrBiji, Selei, Berbera

**Talac**
Area :Alka dehind, Las Durah, Mira and Qotoan

**Mica**
Area : Il Hagan

**Kynite**
Area: Nirid, Darkainle, Mora

**Graphite**
Area : Hamaraha, Marodile.

There are already 29 professionals or high level technicians employed by the Ministry in 1973 and it is expected that more professionals will be available by the end of the year making a strong cadre of professionals and technicians consisting of geologists, hydro-geologist, geophysicists, chemists, drilling engineers, mining engineers and mineorologists. In addition, the foreign assistance component of the project consist of expertise from multilateral sources. It is therefore expected that the work of the National Geology Survey with five parties can start in 1974 itself.

The main targets of the work during the five year period in the Bur Region will be:

a) Prospecting for tin, silver and cassiterite in Bur Hacaba area;

b) Prospecting for sulphides (calcopyrites, pyrites, etc.) in Bur Gulo area.

c) Prospecting in the pegmative veins in the eastern part of the Bur area for feldspars (suitable for manufacture of high quality ceramics);

d) Prospecting marbles of good quality (suitable for building and ornamental purposes) in the Mod-Mode, Bur Galan and Dinsor areas.

e) Further investigations of the phosphate bearing rocks in Bur Hacaba area;

f) Prospecting for vermiculities in the area south-east of Manas Baidoa area).

The mineral and geological exploration in the Bur Region presents various difficulties, the area is covered with heavy bushes and a thick mantle of soil under which geological structures and mineral occurrences are buried. Therefore, intensive geophysical and drilling methods will be employed during the exploration.

As a result of the UN Project activities in the Northern Regions, the following are the reported main mineral occurrences:

1) Lead - Zinc occurrences in Golujet;

2) Lead occurrences in Fulanful;

3) Manganese occurrences in Kudut (Laskoreh area);

4) Copper occurrences in Zain (Laskoreh area);

5) Molybdenite — Galena — Bismuthinite in quartz-pegmatite vein north of Hargeisa.

Besides the above mineral occurrences several anomalies have been discovered as a result of geochemical prospecting carried out by the project in the Northern Regions. Arabiyo, Satwa, Borama and Hamaraha are the main anomalous areas. Through the geochemical survey the principle elements discovered are copper, zinc, chromium, manganese, molybdenum and nickel. The preliminary investigations will be followed up during the programme period.

One of the two parties planned for the implementation of the mineral exploration programme in the Northern Regions will carry out the follow-up of the geochemical anomalies detected by the UN Project, the other one will carry out mineral and geological investigations over the areas with known mineral occurrences. The total cost of the project will be So. Shs. 31.5 million for the period 1974-1978.

### 3. **Mining Equipment.**

The existing stock of mining equipment in the country are at a critical stage of depreciation and depletion. Implementation of the National Geological Survey work will be seriously hampered unless a stock of new equipments are built up in the country. The Development Programme therefore gives great importance to this task and has included a specific project for acquiring equipments for the National Geological Survey. During1974-75, equipments costing a total of So. Shs. 8.4 million will be put at disposal of the Geological Department.

### 4. **Survey of Geothermal Resources Potential.**

Preliminary evaluation of the geothermal resources in the country has shown that this source of energy should be surveyed more deeply in future. The preliminary enquiries had covered the hot springs at Bioculul near Bosasso, Biyogora and Biahengaha near Berbera, and it has been established that there is a case for a follow-up study into the problem of development of geothermal resources in relation to development of tourism, production of electric power, production of desalted water and extraction of disolved minerals if any. The assessment of the geothermal resources requires an examination of the cost as well as the potential for development of these resources.

A two year reconnaissance survey is therefore proposed to be implemented during 1975 - 1976. The survey will include geological and geochemical investigations followed by geophysical survey of selected areas. It is anticipated that this first phase of investigation will be followed by a second phase which would include drilling, engineering and economic studies for electric power and desalted water production. The project will cost So. Shs. 1.6 million as foreign exchange component. While this amount alone is shown in the project cost statement, the local cost component is merged with the cost of the National Geological Survey Project. Additional cost will be involved on this project because the cost of test drilling has not been included in the estimate since it is not clear from the information now available to what depth drilling would be required. There is light rotary drilling equipment now available in Somalia and if this would be used successfully for test drilling, significant reduction in additional foreign exchange cost can be made.

### 5. Tin Mining.

The Somali Government has already made a bilateral agreement for exploration and exploitation of tin deposits in Majayahan. The total investment on this project for the period 1972-1974 of So. Shs. 8.5 million will be financed through external borrowings of which So. Shs. 6.3 million will be the capital cost during its first phase. The operating cost of So. Shs. 4,2 million which was to be received as credit from abroad will now be financed from local resources mobilised through the budget. During 1972-1973, while a total of So. Shs. 3.1 million has been utilised as local cost, a provision of a total of So. Shs. 2.0 million is being made in the Development Programme, 1974 under this head of expenditure. Actual test production is scheduled to start in late 1973.

In case of positive results the activity of the project will continue beyond 1974 and will be converted into an industrial project. Larger tin deposits have been discovered at Dalan in Laskoreh District. This new deposit is nearly 18 km. from Majayaha and the on-going project for tin mining will therefore consider the feasibility of bringing the Dalan area also into its range of activities. Feasibility studies will therefore be conducted during the earlier phase of the Development Programme period to bring the Dalan tin deposit into commercial use as quickly as possible.

### 6. Piezo-Quartz.

Three areas in the country have been identified as having piezo-quartz occurrences. These areas are Bur Mado, Manderia and Abdulcadir. The origin of the piezo-quartz veins and the quality of the crystals differ considerably depending on the geological conditions in each area. The BurMado area appears to be the largest area of pegmatite development within Northern Somalia. This area covers several thousand sq. meters and the deposits can range several hundred meters in length and more than 30 meters in thickness. Sample of quartz from this area shows that the deposits are of extra high quality. The deposits in the Manderia area are smaller and the veins often occur between 400-600 meters in length with hickness ranging from 0.5-1.8 meters. The quartz veins at Abdulcadir are mostly small but occur in continuous zones. These crystals range from 5-20 cm. in length and upto 8 cm. in thickness. Most are transparent and of the first and second grade.

The project for piezo-quartz mining is being included in the Programme on the basis of bilateral agreement for exploration and mining. No financial provision is being shown in the Programme since estimated expenditure has not been finalised.

## 7. Iron Ore.

The iron ore deposits of Bur Galan and Daimir has a potential reserve of 170 million tons, of which 33 million tons according to the recommendations of the survey were considered marketable but are not profitable for mining. The main reason for this is the low content of the ore and the lack of infrastructural facilities like roads, water supply etc. in the area where the ore is located. It is however, the intention of the government that the whole question of utilisation of the ore should be viewed from a broader perspective and therefore, the Ministry of Mining will be making further studies during the Programme period to decide on the possible utilisation of the iron ore deposits through alternative technology suitable to the conditions existing in the area. The programme therefore provides for an investment of So. Shs. 500,000 for additional studies into the problems of iron ore exploitation.

SECTOR: Mining — TOTAL INVESTMENT COST (So. Shillings)

| Sl. No. | PROJECTS | | 1974 | 1975 | 1976 | 1977 | 1978 |
|---|---|---|---|---|---|---|---|
| 1 | MINERAL AND GROUNDWATER SURVEY | 1,683,000 | 1,683,000 | — | — | — | — |
| 2. | NATIONAL GEOLOGICAL SURVEY | 31,500,000 | 4,500,000 | 6,000,000 | 7,000,000 | 7,000,000 | 7,000,000 |
| 3. | MINING EQUIPMENTS | 8,400,000 | 4,200,000 | 4,200,000 | — | — | — |
| 4. | GEOTHERMAL RESOURCE SURVEY | 1,600,000 | — | 800,000 | 800,000 | — | — |
| 5. | TIN MINING | 2,000,000 | 2,000,000 | 2,000,000 | — | — | — |
| 6. | PIEZO-QUARTZ MINING | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. |
| 7. | IRON ORE MINING | 500,000 | 100,000 | 200,000 | 100,000 | 100,000 | — |
| | TOTAL | 45,683,000 | 12,483,000 | 11,200,000 | 7,900,000 | 7,100,000 | 7,000,000 |

# VII. ELECTRICITY AND POWER

Somalia has yet to strike adequate raw material for energy production. Geological survey and exploratory drillings are being carried on land and off-shore to reveal economically exploitable deposits of natural gas, oil, coal and other energy raw materials. The availability of these materials will change the economic structure of the country and enable it to exploit more fully its economic potentialities. Hydro-electric power potential of 5 mw is available in the Giuba river and will be exploited in conjunction with the Fanole Project. As there are no successful oil or gas strikes, the country is at present wholly dependent on imported oil for power stations for electricity. This situation impedes the development of highly sophisticated industrial plants and present a relatively costly bill to provide electricity for light and motive power.

Because of the small loads and the long distances separating townships there are no interconnecting grid systems. Most industrial plants and public establishments are self-suppliers and proper maintenance and provision of fuel at small generating units in isolated locations present severe problems which have to be much more satisfactorily overcome. Much has yet to be done in standardization of equipment, provision of adequate training and establishment of proper organisation planning of the electricity sector.

The Development Programme 1971-1973 envisaged a total investment of So. Shs. 23.5 million to increase the installed power capacity by 6,532 kw., to establish an efficient electricity service and to augment the oil storage capacity in Mogadishu, Berbera and Kismayu. The Programme objectives were later modified to take into account the requirements of rural areas for electricity facilities. This is in line with the socialist principles that the benefit of electricity should be spread to cover the maximum number possible in an effort to reduce the gap between urban centres and rural areas. 50 generating units involving 3,774 kw. were distributed among and installed in the regions. The Mogadishu power station has increased its capacity by 6,400 kw. The distribution of electricity generation among the regions is shown below:

| | | 1970 power capacity (in KVA) | 1973 power capacity (in KVA) | increase |
|---|---|---|---|---|
| 1. | Mogadishu | 6,125 | 14,125 | 8,000 |
| 2. | Hargeisa | 3,908 | 4,778 | 870 |
| 3. | Togdheer | 125 | 1,385 | 1,260 |
| 4. | Sanaag | 55 | 145 | 90 |
| 5. | N. West | 245 | 495 | 250 |
| 6. | Nugaal | — | 150 | 150 |
| 7. | Mudugh | 125 | 265 | 140 |
| 8. | Gal-Guduud | 120 | 150 | 30 |
| 9. | Hiraan | 133 | 343 | 210 |
| 10. | **Upper Shabelle** | 10 | 100 | 90 |
| 11. | Lower Shabelle | 425 | 885 | 460 |
| 12. | Upper Juba | 668 | 1,378 | 710 |
| 13. | Lower Juba | 1,100 | 1,400 | 300 |
| | | **13,039** | **25,599** | **12,560** |

The total investment made for increasing capacity was So. Shs. 15.99 million. The large investment made in Mogadishu is by and large attributable to the city's growth and the expansion of electricity supply to new areas in the city, which have been denied of the amenity before the Revolution.

It is not just enough to increase the electricity capacity in the country, especially in remote rural areas, without the concomitent development of a machinery to service and maintain it regularly. Such a unit requires adequately trained manpower distributed rationally among the regions, basic workshops and equipment essential to service the generating units, a policy of standardization of equipment in order to facilitate the use of spare parts and an organisation responsible for planning the electricity requirements of the country.

The legal instruments governing the generation and distribution of power devolves much of these responsibilities on ENEE, which has the following functions and duties:

- Acceptance tests,
- Erection of new equipment,
- Execution and supervision of maintenance,
- Renovation and major repairs,
- Control of regulations on safety, and
- Standardization of equipment and the establishment of central purchase, storage and distribution of spare parts.

Two major revolving funds, one for provision of spare parts and the other for distribution of equipment involving So. Shs. 3 million have been established under the control of ENEE. The former staff of the Electricity Department of the Ministry of Public Works has been transferred to ENEE to form the backbone of ENEE's staff at the regional level to carry out the maintenance work and to strengthen its technical department in the central station in Mogadishu.

Two stationery workshops, one in Mogadishu and one in Hargeisa and two mobile workshops have also been established at a cost of So. Shs. 950,000. During the 1971-1973 Programme period the government has, in pursuance of its socialist objectives, fully rationalised the ownership of the power units by taking over the private owned plants and devolving the responsibility of running them to the local government organs.

**Oil Depots:** A major investment component of the sector was earmarked for the provision of adequate oil storage depots in the strategic centres of Kismayu, Mogadishu and Berbera. The aim of the project is to enture the reliability and continuity of supply of oil for economic and social development of the country. Intensive design works of the project has been completed.

The cost of the design work was So. Shs. 1.7. million. The construction of Berbera and Mogadishu storage depots are well under way and So. Shs. 1.9 million has already been spent on this. The scheme will spillover into the 1974-1978 Programme period for completion. During 1971-1973 extensive modernisation and expansion of oil distribution in Mogadishu, Kismayu and Galkaio and Hargeisa and the establishment of bulk fleets have been undertaken at a cost of So. Shs. 3.5 million.

Fuel and power are crucial for economic development, and because of inter-dependence between electricity generation and industry, mining, agriculture, irrigation and various social sector users of energy. The development of the sector is of vital importance in building a socialist economy and thus commands very high priority.

It is the objective of the government to set up a self-supporting public electricity authority which will be in a position to organise the supply of electricity as part of the requirements of the national economy for energy. It is the government policy to provide electricity at the least possible cost to the maximum number of users with the maximum reliability of the system.

In reaching these objectives the plan envisages a total investment of So. Shs. 82.60 million to increase the total installed capacity from its present level of 19,800 kw. to 50,300 kw. in 1978; an increase of 255 per cent in five years. Intensive geological exploration for gas, oil and other sources of primary energy will be carried out. A survey conducted in 1972 indicated the availability of geothermal resources in a number of areas of the country.

These hot springs may indicate sources of cheap fuel for electricity development and investigatoins of them will be intensified. All these geological and geophysical investigations aim at tapping fully the potentialities of the country in the development of its primary energy resources.

Standardisation of equipment and management of the electricity plants in the country will be realised. Spare parts and maintenance services will be carried out on a regular basis to ensure uninterrupted supply of power. Intensive inservice training will be undertaken to upgrade the unskilled workers and to provide pre-service training to new recruits. Efforts will be also made to discourage industrial plants from operating their own generators as a permanent source of energy wherever the electricity authorities are in a position to supply the industrial requirements adequately.

The augmentation of oil storage capacity of the country which have been initiated in 1971-1973 programme will be completed. So. Shs. 52.5 million has been set aside for this purpose.

**Planned additional capacity for Mogadishu:** The present installed capacity in the capital is 11,600 kw. This falls short of the current need for power for both industrial and domestic uses. The city is expanding rapidly because of the natural growth of its population and through large migratory influx from rural areas and other parts of the country.

The rationalisation of the settlement pattern of the city has produced horizontal expansion that involves extensive distribution networks which are extremely costly. The provision of electrity in Mogadishu has to aim at meeting the backlog and increased requirement for electricity. Reduction in tariff will be pursued wtih vigour. In the Programme period the generating capacity of the city's power station will increase by 22,300 kw. bringing its total capacity to 31,200 kw. in 1978 net of obsolescence. The total investment earmarked to finance the expansion programme is So. Shs. 42.11 million.

**New capacities at the Regions:** There are no major urban settlments outside Mogadishu, except for Hargeisa, Burao and Kismayo and these to gether have less than half of the population of the capital and their demand for electricity is much lower. Major industrial establishments such as the proposed cement factory in Berbera or the corrugated cardboard box plant in Giamama will have their own motive power. Other medium or small scale industrial units, will have their electricity supplied from the main systems.

The Programme envisages a total investment of So. Shs. 40.48 million to increase the electricity capacity by 8,214 kw. The distribution of the investment and the capacities is given below:

## ELECTRICITY CAPACITY OUTSIDE MOGADISHU
## (in KVA)

| REGIONS | Electricity Capacity 1973 (in KVA) | Increase Capacity 1974-78 | Electricity Capacity 1978 (in KVA) | Investment (in '000 Shs.) |
|---|---|---|---|---|
| Lower Shabelle | 720 | 1,970 | 2,690 | 5,896.0 |
| Upper Shabelle | 90 | 310 | 400 | 1,810.0 |
| Lower Juba | 1,280 | 1,930 | 3,210 | 7,098.0 |
| Upper Juba | 860 | 650 | 1,510 | 4,104.0 |
| Hiran | 310 | 310 | 620 | 2,287.0 |
| Mudug | 300 | 270 | 570 | 1,874.0 |
| Gal-Gaduud | 150 | 250 | 400 | 1,049.0 |
| Nugal | 150 | 150 | 300 | 1,646.0 |
| East | 310 | 370 | 680 | 1,928.0 |
| Togtheer | 1,260 | 960 | 2,220 | 3,222.0 |
| Sanag | 90 | 290 | 380 | 1,333.0 |
| Hargeisa | 5,108 | 2,808 | 7,916 | 8,233.0 |
| **Total** | **10,628** | **10,268** | **20,896** | **40,480.0** |

The Programme foresees doubling the electricity capacity in the regions from 8.5 MW to 16.7 MW. There are also some other projects which involve power development which will be carried out during Programme period. The Fanole project will harness the hydro-electric potential of 5 MW. This energy will be utilised by the project itself and townships of Lower Juba region.

The close relationship between industry and electricity is very much recognized. The special needs of industries in respect of electricity is cheapness, but much more important is the reliability of the supply.. The smallness of the capacities of the generator plants in most of the towns and their poor records of performance forced almost all the industrial establishments outside Mogadishu to have their own power plants. It is the aim of the government, as already mentioned, to encourage all industrial plants to use the public electricity supply and this necessitates building up adequate capacities in projected industrial areas of the country, mainly in Mogadiscio, North West and Lower Juba regions and this concentration accounts for the relatively high growth rate of their electricity utilities in the Programme. While the full requirements of the industrial sector for electricity has not been fully ascertained, it is the objective of the Programme to synchronize as far as possible industrial development and electricity expansion. The Ministries of, Industry and Planning and Coordination and the ENEE will work in close collaboration in this respect.

An important government policy is that major industrial establishments such as the fish plant in Las Korey and Somaltex in Balad should provide electricity to the towns they are located in a manner the Sugar factory in Giowhar is at present doing. This is to reduce overhead costs and at the same time provide social and economic services to these communities.

**Electricity Service:** To ensure reliability and continuous operation of the electricity system strenghtening the recently established Electricity Service is imperative. The unit has at present two stationery and two mobile workshops. This is not sufficient in a large country such as Somalia and to remove this handicap, the Programme foresees an investment of So. Shs. 1.64 million for a mobile workshop, equipment for a stationary workshop and field testing equipments. The training school of the ENEE will be fully used in up-grading the proficiency of the regional staff.

**Oil Depots:** During the Programme period, the oil storage depots at Berbera, Kismayo and Mogadishu will be completed. So. Shs. 52.3 million will be required for completing the scheme. The project will increase the total capacity of the oil depots by 49,000 m$^3$, distributed among the three centres as follows:

| Location | | Capacity |
|---|---|---|
| Mogadishu | | 14,200 m$^3$ |
| Kismayu | | 15,200 m$^3$ |
| Berbera | | 19,300 m$^3$ |
| | **Total** | **49,400 m$^3$** |

The project will be in a position to ensure uninterrupted supply of fuel in the country and will provide bunkering facilities in Berbera and Kismayu.

### REGIONAL INVESTMENT IN MACHINERY (in So. Shs. 000)

| REGIONS | 1974 | 1975 | 1976 | 1977 | 1978 | Total |
|---|---|---|---|---|---|---|
| Lower Shabelle | 1,224 | 284 | 203 | 203 | 160 | 2,074 |
| Upper Shabelle | — | — | 79 | 79 | 129 | 287 |
| Lower Juba | 174 | 1,060 | 1,060 | 100 | 289 | 2,683 |
| Upper Juba | 150 | 129 | 203 | 311 | 50 | 863 |
| Hiran | 50 | 160 | — | 124 | 50 | 384 |
| Mudug | 210 | 79 | — | 50 | 50 | 389 |
| Gal-Gudud | 100 | 50 | 120 | — | 100 | 374 |
| Nugal | — | 50 | 158 | — | — | 208 |
| East | 303 | — | 79 | — | 129 | 511 |
| Togdheer | 1,060 | 100 | 160 | — | — | 1,320 |
| Sanag | 174 | — | — | 100 | 124 | 398 |
| Hargeisa | 334 | 1,657 | 129 | 1,360 | 50 | 3,520 |
| **Total** | **3,779** | **3,569** | **2,195** | **2,347** | **1,131** | **13,021** |

### REGIONAL INVESTMENT IN DISTRIBUTION (in So.Shs. '000)

| REGIONS | 1974 | 1975 | 1976 | 1977 | 1978 | Total |
|---|---|---|---|---|---|---|
| Lower Shabelle | 853,000 | 1,340,780 | 835,340 | 515,890 | 277,190 | 3,822,200 |
| Upper Shabelle | 142,000 | — | 624,000 | 624,000 | 133,400 | 1,523,400 |
| Lower Juba | 2,092,200 | 493,200 | 538,294 | 510,213 | 781,093 | 4,415,000 |
| Upper Juba | 1,061,000 | 855,960 | 723,634 | 367,093 | 233,712 | 3,241,400 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Hiran | 939,000 | 315,000 | 231,867 | 231,866 | 185,067 | 1,902,800 |
| Mudug | 448,133 | 466,854 | 484,933 | 84,880 | — | 1,484,800 |
| Gal-Gadud | 40,000 | 65,300 | 123,734 | 172,433 | 273,933 | 675,400 |
| Nugal | 185,600 | 532,600 | 232,400 | 46,800 | 440,600 | 1,438,000 |
| East | 634,267 | 93,600 | 350,467 | 303,666 | 34,800 | 1,416,800 |
| Sanag | 348,600 | 372,200 | 472,200 | 274,300 | 267,900 | 935,200 |
| Togdheer | 836,640 | 349,080 | 441,080 | 234,400 | 40,400 | 1,901,600 |
| Hargeisa | 1,647,000 | 1,326,800 | 502,900 | 712,700 | 523,200 | 4,712,600 |
| **Total** | **9,227,440** | **5,911,374** | **5,160,890** | **3,978,241** | **3,191,296** | **27,469,200** |

## DISTRIBUTION LINES

| **REGIONS** | **H.T. Line (in Km.)** | **H.T. Line (in Km.)** | **Total** |
|---|---|---|---|
| Lower Shabelle | 24.50 | 29.00 | 53,50 |
| Upper Shabelle | 1.77 | 5.00 | 6.77 |
| Lower Juba | 20.00 | 55.00 | 75.00 |
| Upper Juba | 15.00 | 40.00 | 55.00 |
| Hiran | 10.00 | 21.00 | 31.00 |
| Mudug | 8.00 | 16.00 | 24.00 |
| Gal-Gadud | 2.00 | 10.50 | 12.50 |
| Nugal | 8.00 | 15.00 | 23.00 |
| East | 7.54 | 22.60 | 30.14 |
| Sanag | 3.00 | 14.00 | 17.00 |
| Togdheer | 8.00 | 27.00 | 35.00 |
| Hargeisa | 23.00 | 47.46 | 70.46 |
| **Total** | **130.81** | **302.56** | **433.37** |

## GLOBAL INVESTMENT (in So. Shs. '000)

| | 1974 | 1975 | 1976 | 1977 | 1978 | Total |
|---|---|---|---|---|---|---|
| 1. Mogadiscio | 3.700 | — | 10.000 | 20.000 | 8.410 | 42.110 |
| 2. Electricity Service | — | 1.640 | — | — | — | 1 640 |
| 3. Other cities | 13.007 | 9 480 | 7.356 | 6.325 | 4.322 | 40.490 |
| 4. Oil Depots | 20.000 | 20 000 | 12.300 | — | — | 52.300 |
| **Total** | **36.707** | **31.120** | **29.656** | **26.325** | **12.732** | **136.540** |

## VII. INDUSTRIAL SECTOR.

**Setting :**

In 1960 there was virtually only one large industrial unit (a sugar plant) and a few small and cottage industry units in Somalia. Industrial surveys conducted regularly since 1967 indicate an encouraging growth rate in terms of total employment, value added and gross output at market price. A part of these growth rates is due to price changes and improvement in statistical coverage. The real growth has been substantial in spite of the continuing smallness of the industrial base. The following table shows the progress of the industrial sector in the period between 1967 and 1971:

**INDUSTRY GROUP**

| | No. of Establishments | | No. of Persons engaged | | Value added So. Shs. ('000,000) | | Gross output Sh. Sh. ('000,000) | |
|---|---|---|---|---|---|---|---|---|
| | 1967 | 1971 | 1967 | 1971 | 1967 | 1971 | 1967 | 1971 |
| Food Manufacturing Ind. | 17 | 58 | 1,910 | 3,489 | 32.8 | 94.1 | 41.8 | 165.8 |
| Beverage Industries | 4 | 5 | 122 | 206 | 0.9 | 2.5 | 1.4 | 5.2 |
| Manufacture of textiles | 20 | 7 | 830 | 797 | 0.4 | 4.4 | 10.1 | 10.2 |
| Leather & Foot-wear Ind. | 8 | 11 | 105 | 289 | 0.6 | 1.2 | 1.4 | 2.8 |
| Furniture and Fixtures | 29 | 30 | 235 | 421 | 1.2 | 1.8 | 2.2 | 3.7 |
| Printing, publishing Ind. | 4 | 8 | 78 | 265 | 0.9 | 4.7 | 1.7 | 7.0 |
| Other chemical products | 3 | 9 | 33 | 159 | 0.1 | 1.2 | 1.0 | 5.9 |
| Structural clay products and lime | 19 | 33 | 209 | 308 | 0.2 | 0.2 | 2.5 | 2.7 |
| Metal products | 3 | 10 | 42 | 105 | 0.2 | 0.4 | 0.5 | 0.7 |
| Jewellery, etc. | 8 | 10 | 57 | 87 | 0.2 | 0.2 | 0.7 | 0.7 |
| Other Industries | 6 | 6 | 115 | 82 | 6.0 | 1.4 | 9.7 | 1.7 |
| **Total** | **121** | **187** | **3.716** | **6.208** | **43.5** | **112.1** | **73.0** | **206.4** |

SOURCE MINISTRY OF PLANNING.

Most of the industial establishments are consumer goods industries. of 122 establishments enumerated in 1967, 89 were consumer goods industries and the rest intermediate goods industries. No major capital goods industry has yet been established. In terms of productions, 95 per cent of the total value added generated in the manufacturngi sector was accounted for by the consumer goods industries in 1967. This percentage has increased to 97.4 in 1971 because of the sharp growth in food processing industries.

Industrial units in Somalia are based on known resources of the country, such as livestock, agriculture and fisheries. 81% of the total industrial value added was by industries based on the national resources in 1967. This percentage has risen to 94% in 1971.

Building materials industry has not yet been developed to any appreciable degree. This was not in any way attributable to shortage of suitable raw materials or absence of demand. The main stumbling block was that raw material deposits were far away form the consumption centres and an almost total lack of reliable means of transport stood in the way of making use of them.

The major industrial establishments in Somalia have relied by and large on export markets and the medium and small scale industries on domestic markets. This is a sound policy in a country whose markets have hitherto lacked homogeniety because of inadequate infrastructural services or purchasing power. But it remains significant that industrial export accounts for only 4 percent of the total export and therefore efforts have to be concentrated on raising the proportion of manufactures in total exports.

The distribution of industries by their relative size indicate the predominence of medium and small scale industrial unit. In a limited survey conducted in 1968, 5 establishments were seen to employ more than 100 persons, 40 between 10 to 99 and 50 less than 10. In 1971, there were 11 establishments employing more than 100 workers 71 between 10 to 99 and 113 less than 10 workers.

Even though the large industrial units account for nearly one half of employment, about 85 percent of the industrial output was recorded by them. The large industrial establishments are mostly public enterprises, while the medium and small scale industries are private. The public owned establishments account for 81% of the total industrial output. The dominence of the private sector is more pronounced in small scale and cottage industries which are scattered and which have not been adequately covered by industrial surveys. The share of the private sector in total output has been greatly reduced by nationalisation and its relative importance minimised by the increased state participation in new establishments. The following table shows the relative importance of private and public sectors in industry:

| Items | Public indus. | % | Private indus. | % |
|---|---|---|---|---|
| No. of establishments | 18 | 9.2 | 177 | 92.8 |
| Total No. of persons engaged | 373.5 | 56.5 | 2,879 | 18.5 |
| Wages & salaries paid to employ. | 24,158,532 | 75.4 | 7,861,640 | 24.5 |
| Gross fixed capital formation | 8,194,034 | 61.2 | 5,194,781 | 38.8 |
| Value of gross output | 165,137,522 | 75.2 | 54,535,281 | 24.8 |
| Value added | 108,016,866 | 88.2 | 14,144,577 | 11.8 |
| Average value added per establishment | 6,000,938 | | 81,608 | |
| Average value added per operative | 37,299 | | 6,928 | |

The role of the private sector in industrial development has beee clearly defined by the Revolutionary government and a number of state policy announcements have been made to allay fear of nationalisation. Results commensurate with these efforts have not yet been achieved and intensified attemps are needed to persuade the private sector to play a much more positive role in national development.

The most intractable problem in development is the availability of skilled manpower. Because of the smallness of the industrial base, new industrial units serve more as a training ground for future industrial workers than as an investment which will make immediate returns. There are only two institutes that have been effectively developed to train middle level technical personnel. Taking account of the normal gestation period of such institutions and the smallness of their output, there was and still is severe shortage of skilled manpower. According to a manpower survey carried out in 1972 the manpower shortage in selected occupations are 2,350 professionals, 100 executive personnel, 1,250 clerical staff and 1,900 craftsmen. No financial institutions geared to industrial development have been established except for the Somali Development Bank whose responsibility covers a wide range of activities and whose financial capability does not permit it to satisfy fully the need and demand for development finance.

Achievements in decentralisation of industrial development leave much to be desired. In 1971, what was then Benadir Region accounted for 75 percent of the total industrial establishments and over 80 percent of the industrial output, showing almost total concentration of industries in a single region. This process accelerates the migration of the productive forces to a single region and unless immediate remedial actions are taken this structural imbalance will have grave social and economic consequences.

**Strategy.**

Industrial development for many years to come, will be supported by the natural endownment of the country especially livestock, fisheries, agricultural raw materials and mining. The major role of the industrial sector is and will be to utilise fully these raw materials for import substitution and for export promotion in large, medium and small scale industrial units. Successful operation of existing establishments and new industries based on the country's resources will set the pace of industrial growth for the near future. This is of vital importance for rapid economic development of the country.

Long-term industrial strategy will also set up progressive steps for harmonizing external and internal trade regulations with the requirements of the industrial sector. External markets for new manufacturing projects have to be sought before implementation of these projects. Customs regulations, export credits and export facilities will be streamlined to facilitate increased industrial production. Close cooperation in this field between ministerial departments dealing with industry and external trade is essential. Internal market will be carefully surveyed and main markets and distribution channels will be synchronised with the industrial production programmes. Organising gross and retail trade facilities over the whole country and spreading from the important centres towards remote places will constitute one of the basic measures for unifying and widening the national market and changing the consumption pattern to conform with the capabilities of the economy.

For a country with a small market for manufactured products, and a very low population density, it is important to plan for development of capital intensive industries operated on modern technology, so that export markets could be developed on a competitive basis. There is much scope for development of export markets for a number of existing as well as new resource-based industrial products. A strategy will be evolved to realise this objective. The country has gained expertise and skill in manufacturing livestock-based and fish-based products for export markets. There is prima-facie scope for developing export markets for products based on sugar, leather, fish, fruits and vegetables.

The public sector will continue to play a role in industrial development of the country. Policies and strategies for the development of industries in the public sector will have a vital bearing on industrial growth. The potentialities for industrial development in the private sector will be fully exploited and it will be allowed an important role in industrial development of the country. Harmonizing the development of both public and private sectors for planned realisation of the industrial growth targets of the country will constitute the foundation of a long-term industrial strategy. The spheres in which the public and private sectors should function will be clearly demarcated. The government will give all possible technical and advisory guidance to the private sector to play its assigned role in industrial development.

In order to facilitate development of both public and private sectors for realising the overall targetted industrial growth, a clear demarcation of the areas for industrial development by Government, solely or by government and private sector, indigenous or foreign, jointly and solely by the private sector will be laid down by government. Such demarcation of spheres for industrial development should facilitate industrial planning, project formulation and time-bound implementation by government and potential private investors. Any lingering doubts on the part of potential investors or individual entrepreneurs regarding the possible areas of industrial activities should also be cleared by a clear enunciation of policy.

It is the policy of the government to allow the private sector to develop without any hindrance within the areas earmarked for its activities and necessary measures to facilitate its growth will be introduced during the Programme period. In order to regulate and strengthen the existing organisational institutions, and finacial arrangements for private investors — indigenous and foreign — to join together for industrial activities within the country a comprehensive company law is proposed to be enacted. The law is intended to regulate the formation, registration, organisation, management, submission of accounts and returns to the shareholders and to government authorities concerned, termination of business, dissolution, etc. The opportunity will also be availed off to unify the existing laws, rules and regulations on companies.

In addition and in order to attain rapid industrial development, a study of all the existing laws, rules, regulations, systems and procedures in vogue regarding the formation of new industrial units, their management, and functioning will be studied with a view to remove the hurdles in establishing new industries or expansion or modification of existing units etc. as quickly as possible and suitable remedial measures — legal, administrative and procedural — will be taken during the Programme period. The procedure for registration and licensing of industrial units and their formation and functioning will be streamlined and simplified. Facilities likely to be made available by government for commencement of new industries in the form of financial assistance or tax exemptions for infrastructure facilities, like water, electricity and communications etc will be spelt out therein.

Foreign collaboration as an important means of acquisition of modern and sophisticated technology is fully recognized by the government which relies on friendly countries and international organisation, to assist in the development of a modern industrial base capable of self-sustaied growth. Foreign investment and foreign participation in industrial development will be allowed on the specific condition that such participation will expedite the rapid transformation of the economy and would facilitate the kind of social development the country aspires to. Foreign investment policy will be reviewed and reformed to reflect the role assigned to foreign investmente in the economic life of the nation.

A new approach and strategy for the development of small scale industries, and handicrafts will be evolved during the Programme period. Proper definition of large, medium, and small industries, creation of legal, institutional and other measures, enactment of an overall industrial law to facilitate systematic and regular growth of industry, and abo-

[illegible] reorganisation of the Ministry of Industry to cater to the policy of industrial development proposed in the Programme will be undertaken.

Another important long-term policy measure relates to the optimum size of industried units in different manufacturing sectors under the prevailing conditions in the country, and the combination of regional dispersion and concentration of industrial estabilshments around the main cities.

The most intractable problem in development is the question of availability of manpower to man the expanded development activities. This is of utmost importance in the field of industry. The educational system of the country will be streamlined to provide the industrial sector with the required middle level manpower it needs. The Technical Institute in Burao, Mogadishu and Hargeisa will be strengthened and restructured in response to industrial and development requirements. The proposed ploytechnic will be developed and given the requisite flexibility to meet the industrial demand. A new craftsmen training centre will be established to upgrade the technical hands available to increase their output and to enhance their workmanship.

To sum up, the strategy for industrial development in the proposed Programme will be:

1. Consolidation and maximisation of efficiency and profitability of the existing large enterprises in the public sector;
2. Creation of new public sector industrial units in fields vital to the national economy;
3. Encouragement and development of the private sector to enable it to grow and contribute to industrial growth;
4. Encouragement of foreign capital participation in setting up new projects in public sector or private sector on joint ventures;
5. laying down appropriate principles of concentration and dispersion in location of new projects;
6. Consolidation and regrouping of small scale industrial units and handicrafts into viable economic size in the form of cooperatives to support more sophisticated industrial development;

7. Continuous survey of industrial opportunities, and preparation of feasibility studies for future industrial development of the country.

In realising the industrial objectives and implementing the strategy, the Development Programme 1974-1978 envisages the effective utilisation and maximum exploitation of the existing industrial potential, eliminating under-utilisation of capacity and increasing technical and managerial efficiency through modernisation. The Programme emphasises the need for adequate raw material for these industrial plants, better management and introduction of modern technology wherever appropriate and possible. The following large public enterprises will be strengthened to raise their efficiency: the textile factory in Balad, Jowhar Sugar Factory, Kismayu Meat Factory, the Milk Factory and the boat building yard.

A vigorous programme for the establishment of new industrial units which will assist import substitution and/or export promotion will be launched. 31 industrail units are programmed for in the period 1974-1978. These industrial establishments will be mostly resource-based. 9 are based on agriculture and forestry, 7 on livestock, 3 on fisheries and 12 on mineral resources and chemicals. An extensive programme to assist the small scale industrial units and handicrafts will also be implemented.

The total investement of the industrial programme will be So. Shs. 549,518,000 of which So. Shs. 132,750,000 will be invested in the modernisation of existing plants and So. Shs. 416,768,000 for the creation of new units. The industrial programme would require a total working capital of So. Shs. 88,1 million during the Programme period. A part from the increase in employment due to modernisation of existing establishments, the investment in the sector will generate direct additional employment of 3,035 persons and over So. Shs. 270,000,000 in value added per annum.

The programme envisages an important role for the private sector in the establishment of new units, and the consolidation of the existing ones. The government will endeavour to supply to the private sector the basic studies and technical reports on projects, while the financial institution will give the necessary support in the form of credit and advances. The Ministries of Industry and Planning will give advice and guidance to prospective investors. These institutions will keep an uptodate list of projects which the government reserves for the private sector.

# INDUSTRIAL DEVELOPMENT PROJECTS

## 1. Somaltex:

The old machinery which have been a major handicap in the successful operation of the mill will be completely replaced and modern machinery with much large capacity will be installed. The mill after modernisation will have an annual production capacity of:

| | | | |
|---|---|---|---|
| Grey cloth | 5.0 | million | yards |
| Bleached cloth | 5.5 | » | » |
| Coloured drill | 1.1 | » | » |
| Multicoloured cloth | 0.7 | » | » |
| Towels | 0.4 | » | » |
| Printed cloth | 6.0 | » | » |
| | **19.9** | **million** | **yards** |

Furthermore the plant will produce about 2.0 million yards of knitted articles, 120 tons of medical cotton, and 136 tons of hand loom yarn.

The breakdown of the investment is given below:

| | **So. Shs.** |
|---|---|
| — Replacement of the old machinery | 80,250,000 |
| — New machinery | 12,900,000 |
| — Building and construction | 3,000,000 |
| | **96.150.000** |

## 2. Jowhar Sugar Factory:

The sugar factor in Jowhar has a designed capacity of 50,000 tons of sugar per annum. Though the internal consumption of sugar exceeds the capacity of the plant the factory has not operated at full capacity due to technical, agronomic, and administrative bottlenecks.

It is the aim of the government to streamline the adiministration of the factory and to modernise the plant to eliminate the present underutilisation of capacity. This entails investment both in the industrial and in the agricultural branches of the operations. So. Shs. 20.1 million will be invested for the modernisation of the distillery, the oxyegen plant and the workshop. A further investment of So. Shs. 20.000 million will be made in sugarcane farming to expand the area under cultivation from 6,600 ha. to 7,200 ha. This expansion is required in order to produce 5 million quintals of cane to enable the factory to produce 50,000 tons of refined sugar.

### 3. **Milk Processing Factory:**

The factory has an installed capacity for processing 20 tons of milk daily. But it has never reached its full capacity since its establishment in 1965 due to inadequacy in the supply of raw milk. A dairy farm which was reorganised and developed to supply milk to the factory has not produced sufficient supply. The supply of milk has remained small and erratic during the dry seasons.

The government will reorganise the dairy farm and will take measures to regroup the cattle owners in the city in the form of co-operatives. Every effort will also be made to encourage the establishment of new co-operative dairy farms along the Shabelle River.

The factory needs extensive modifications of its machinery to raise its efficiency and output. It is the intention of the government to install a sterilisation plant, a filling machine with lining, butter canning and ice cream machines. Replacement of old machinery will be undertaken and refrigerated milk vans will be purchased. The total investment for the modification and modernisation is estimated to cost So. Shs. 5.0 million and can only be economically and socially justified if the milk supply problem is solved.

### 4. **Fish Processing Cannery - Laskorey:**

Augmentation of the fishing fleet and extension of the pier were planned to be completed durnig 1971-1973. While some fishing boats have been acquired during this period, the existing fishing fleet of the factory was partly damaged during the two cyclones which hit the area in 1971 and 1972. Eventhough the Somali-Soviet Expedition has contracted a period of two years to supply 1087 tons of tuna to the cannery per annum, its installed processing capacity of 7,000 tons of fish per annum will still need to be supplied. Arrangements for catching an additional 6,000 tons will require the following fleet and operations:

| | |
|---|---|
| 40 boats at 60 tons each per year | = 2,400 tons |
| 20 boats at 40 tons each year | = 800 tons |
| 20 hired boats at 60 tons each year | = 1,200 tons |
| 20 Somali boats (factory & Private at 40 tons each/year) | = 800 tons |
| 50 hories at 15 tons each/year | = 750 tons |
| **Total:** | **5,950 tons** |

These 100 motor boats and 50 hories which are being acquired will operate on a permanent basis. An additional 20 motor boats will also be purchased to replace the hired boats. The total manpower requirements for the boats is 280 persons. The fish resources needed for exploiting fully the existing fish processing facilities in the region have been indicated in the fisheries section and planning of fish catches for Laskorey will also have to be made as part of overall planning for supplying the fish requirements of all the processing units.

The existing cold storage facility is intended to store 800 tons of fish. As the quantity of fish catch to match with processing capacity become available, the cold storage facility has to be expanded. The present gap of about 500 to 600 tons of cold storage facility is planned to be made-up to make the cannery self-sufficient. An estimated outlay of So. Shs. 1,000,000 will be required for this expansion. Technical elaboration will be drawn before the investment is made. The expansion of the pier was envisaged even before the factory was built. Recent cyclones have damaged the existing pier and a floating pier for loading and unloading purposes is required. Extension of the pier by 250 metres and providing a floating pier are estimated to cost So. Shs. 4 million. It will be necessary to exploit fully the existing fish meal plant and to install a package boiler for operating the fish meal plant continuously for this purpose. An estimated So. Shs. 1.5 million mostly in foreign exchange is required for this purpose. Simultaneously, marketing arrangements for fish meal is being organised both inside and outside the country. The total investment for modernisation of the plant is So. Shs. 6.5 million.

5. **Meat Processing Factory - Kismayu:**

The meat factory in Kismayo is now working at full capacity. Its cold storage facilities are however smaller than the requirement and the feasibility for expansion of existing cold storage facility is under study. The expansion is intended to facilitate the storage of carcass meat for export. The present cold storage capacity of the factory is 360 tons. It is the intention of the government to increase the cold storage capacity to 1000 tons. An estimated investment of So. Shs. 3.0 million is provided in the five year Programme, 1974-1978.

6. **Cigarettes and Matches Factories:**

A project for manufacturing cigarettes and matches in Somalia is nearing completion and is likely to be commissioned on early 1974. The site of the factory is situated in the planned industrial area in Mogadishu. When completed the factory will work one shift, producing 23,000 cartons of 10,000 cigarattes per annum of filtered and non-filtered cigarettes using flue-cured tobacco. The factory will also produce 12,000 cartons of 1000 boxes of matches per year. Adequate working capital will be made available to the project by the Somali Development Bank.

7. **Boat Building Yards:**

The boat building yeard at Mogadishu is at present manufacturing 6.5 metre boats equipped with 29 h.p. engines. These boats have proved to be inefficient in operation and uneconomic to manufacture. Further, the output of the yard is very small compared to the requirements. The feasibility of manufacturing 8 meter length boats equipped with 29 h.p. engine is presently under study, which will increase the output to eighteen motor boats per anum. It will be necessary to expand the building berths to facilitate the increased output. The total investment required for the expansion of Mogadishu Boat Building Yard is So. Shs. 1.0 million. It is also proposed to establish three more boat building yards at Bossasso, Kismayu and Berbera at a cost of So. Shs. 4.5 million. The total manpower requirements of the four boat building yards is estimated to be rauond 175 to 180. 30 persons are now engaged in the existing Mogadishu yard and 20 new persons will be absorbed as the expansion takes place. The Bosasso and Kismayu boat building yards will be employing 50 persons each and that of Berbera is expected to take 25 to 30 persons.

### 8. Corrugated Ship Containers:

At present Somalia exports annually nearly 120,000 tons of bananas for which 10.0 million corrugated ship container are imported. The containers are imported from Italy and in order to free this vital export industry from dependence on imported containers, it is necessary to set up a unit to manufacture them in Jamama. The capacity of the plant will be 9.0 million contrainers per year. The plant will also produce 880,750 kg. of polythene bags per annum. The polythene manufacturing plant was commissioned in 1972 and the container manufacturing plant is expected to be commissioned in 1974. The estimated total cost of the container manufacturing unit is So. Shs. 44.6 million. The employment potential of the plant is 67.

The raw material for making the containers will be imported in the first stage in the form of sheets and the plant at Jamama will cut and manufacture the containers according to the sizes required. The second phase of the project will utilise local raw materials for manufacture of boards. Research on local materials for paper and paper board will be taken up during 1974-78.

### 9. Foundry and Mechanical Workshop (Expansion):

The project for setting up a foundry and a mechanical workshop enxisages comprehensive production programme and is to be realised in two phases. The first phase which involves the production of 450 tons (250 tons grey castings, 50 tons non-ferrous metals casting, 130 tons steel structures and 20 tons forging and bolts) and the mechanical workshop for castings of spare parts and processing them by cutting, binding, forging, welding, turning, milling etc. has been taken up in the Development Programme 1971-1973. The construction work has started late in 1973 and will be fully completed in early 1975. The second phase for increasing the production of castings to 1500 tons per annum (700 tons grey cast iron castings, 200 tons non-ferrous metals castings, 500 tons steel structure nad 100 tons foging and bolts) with will cover the needs of industry, agriculture, water and sewage works etc. is proposed for inclusion in the latter part of the Programme 1974-1978. Consultants have been commissioned for design drawings for both the stages. Service and auxiliary facilities will be created by the time the existing project is completed. An investment of So. Shs. 7,600,000 will be made for the realisation of the first phase. An additional investment of 4.7 million will be made for its completion.

### 10. Gypsum Pilot Project:

Detailed geological investigations show that in Suria Malableh, near Berbera is located one of the world's largest deposits of gypsum consisting of 7.0 million tons of gypsum and anhydrite reserves. Studies on the industrial uses of gypsum indicate that it could be used for the production of prefabricated panels, medical plaster, school chalk and for plaster of Paris. The Development Programme 1971-1973 incorporated a pilot project for the development of the gypsum reserves, but because of the failure of UNIDO assistance to materialise the implementation of the project has been negligible.

The Programme 1974-1978 foresees the implementation of the pilot project which aims at testing the commercial viability of the products and popularisation of the use of gypsum products in the construction industry. The pilot plant will have a capacity of 265 tons of calcined gypsum, 20 tons of medical plaster and 13,000 boxes of school chalk per year. The realisation of the project will help the country to open the quarry and to start the development of gypsum manufacture and utilisation of the rich gypsum deposit. The results of the pilot plant work will show the possibilities of further development in gypsum manufacture in the country.

The total investment of the project is So. Shs. 2,373,615.

### 11. Refinery:

Imports statistics indicate that Somalia is currently spending about So. Shs. 20.0 million on mineral fuels, lubricants and related materials. The consumption of this commodity will substantially increase in view of the heavy programme of industrialisation, mechanisation of agriculture and expanded general services.

In view of the size of the imports bill and its future trend and in view of the proximity of Somalia to the major oil producing countries, the need to establish a local refinery is foreseen. The feasibility of a refinery with the capacity of 10,000 barrels a day has been confirmed and will be located in Mogadishu.

The total cost of the project is So. Shs. 54.0 million.

### 12. **Oil Mills:**

Edible oil constitute an important dietray component of the ordinary citizen. There are a number of small oil mills which are scattered over the country, especially in the major urban centres near the agricultural belts. These small-size plants cannot meet the national demand for edible oil and their production has to be supplemented by a large and increasing quantity of imports. The present imports is of the magnitude of 4,300 tons per year, involving a foreign exchange drain of So. Shs. 13.3 million. The imports are expected to rise to 5,000 tons in 1975.

In response to these problems the government has nationalised the purchase of all oil bearing crops in an effort to increase their production by giving the farmers a guaranteed market and fair prices. Furthermore, a campaign to reach self-sufficiency in edible oil is being launched and increased production is planned by the agriculture Crash Programme, Afgoi-Mordinle Project and the cotton production plan in Balad area. The private sector and the cooperatives are also given technical assistance and improved seeds to increase the cultivation of oil bearing crops.

In order to give ready processing capacity for the output of oil bearing crops ,two oil mills will be established, one in Lower Shabelle and the other in Lower Juba regions. The two plants will have a combined production capacity of 4,800 tons of edible oil per annum.

The phasing of construction of the units will be synchronized with the Programme for increasing the production of oil seeds. The investment required is So. Shs. 6.0 million.

### 13. **Sugar Factory: Lower Juba:**

The feasibility study for setting up a new sugar complex in the Lower Juba in Bardera-Yonte area, has already been prepared. The new sugar mill will have a capacity of 50,000 tons of sugar per annum and the sugar cane plantation will cover an area of 6,856 hectares of land ultimately yielding 454,410 tons of sugar cane, all to be realised in a period of seven to eight years. 2% of the bagasse will be utilised for manufacturing panels for house buildings. In addition to other uses, molasses will also be utilised for manufacturing cattle feed. The mill will have auxiliary facilities like steam generators, power generating station, transformer yards, water supply system and a chemical laboratory. The mill will employ 541 persons for an operating period of 288 working days per year. The infrastructure facilities like agricultural services, farming centres, villages, roads, workshops, training centres, construction works, etc. are also proposed as a part of the complex.

The estimated investment for the project is So. Shs. 247,865,000 (excluding the working capital requirements of So. Shs. 22,000,000.00). The outlay for plantation will be So. Shs. 101,096,000. The investment component of the plantation project is incorporated in the agricultural sector. The outlay for the industrial sector will be So. Shs. 147,000,000.

### 14. **Flour Mill-Cum-Pasta Plant:**

The total imports of flour into Somalia is about 18,000 tons a year involving an expenditure of So. Shs. 25.4 million. Imports of pasta in 1971 was 16,538 tons at a cost of So. Shs. 16.3 million. These two commodities together constitute the second most important food import item after rice. It is therefore the intention of the government to provide within the country the manufacturing capacity for pasta and flour. While the plant will rely on imported wheat and other inputs in the initial period, it is anticipated that the facility will encourage wheat production in the country.

The mill will have a production capacity of 600 quintals per working day. Two-thirds of this production will be milled flour and one third pasta. The plant will experiment with production of pasta and noodles from sorghum and maize flour. It will have an employment potential of 60 workers. The total investment of the project is So. Shs. 15.0 million.

### 15. **Slaughter House - Hargeisa:**

A feasibility study for setting up a slaughter house in Hargeisa for exporting mutton and beef has been prepared. A slaughter house with a daily capacity for slaughtering 500 heads of sheep and 70 heads of cattle with cooling facilities — pre-cooling and freezing rooms to keep a day's production of meat and cold storage room to store the meat for two slaughtering days, with a cushion to store by-products or extend storage for few days, if the turn over is slowed down due to transportation problems, has been proposed. In order to meet the livestock requirements of the proposed slaughter house holding grounds for sheep and cattle are being established. The estimated investment of the factory is So. Shs. 3,179,000. Working on an effctive slaughtering capacity of 110,000 sheep and 6,000 heads of cattle per annum, the project is economically feasible.

16. **Mogadshu Slaughter House:**

A detailed feasibility study for the construction of a complex slaughter house with canning and other auxiliary facilities is available. The government will start the project with a less ambitious scheme than the one proposed in the study. It will at first be confined to an abatoir which coud be expanded in the future. The full capacity of the abatoir will be 54,960 heads of cattle or its equivalent of sheep and goats a year. The total cost of the project will be So. Shs. 1.2 million.

17. **Hides and Skins Improvement:**

Hides and skins are a major export of the country but their potentialities as industrial raw material have not yet been developed to any appreciable degree. The country exports its hides and skins in raw form foregoing the large foreign exchange accurable if simple processing is done before export. In 1971 Somalia exported 3,378 tons of hides and skins of the value of So. Shs. 5.755 million. The estimated annual production of sheep and goats skins and of cattle and camel hides is 5,092,000 and 282,700 pieces respectively.

Present consumption of hides in local tanneries is about 42,000 per year. It is expected that an additional 48,000 hides will be required to meet the expanded capacity of local tanneries and manufacturing units. About 192,000 hides will therefore be available for export annully. It is the intention of the government to establish tanneries with adequate capacity to process the exportable surplus of hides.

The tanneries, one in Mogadishu and the other in Kismayu, will be established. The design capacity of the plants and the investment outlay is given below:

| Location of Tannery | Capacity (hides/year) | Cost (So. Shs.) |
|---|---|---|
| Mogadishu | 60,000 | 1,344,200 |
| Kismayu | 120,000 | 1,069,200 |
| **Total** | **180,000** | **2,413,400** |

The relatively low investment cost of the Kismayu tannery is attributable to the availability of facilities which the tannery will share with the Meat Factory. Both the tanneries will have built-in facilities for expanding processing. The two existing small tanneries in Mogadishu and Brava will be improved to make the maximum utilisation of the available idle capacity and trained manpower in the areas.

The Hides and Skins Development Project in Mogadishu will continue to be the training centre for hides and skins improvement. The service of the centre will be expanded to the regions and to the various tanneries for introduction of improved techniques of production.

In the field of skins development, the government is fully aware of the possibilities of increasing the returns to the nation by introducing simple processing techniques. Compared with raw skins, the price of the pickled skin is 10 to 15% higher, semifinished 45-50%, full vegetable crust leather in the finish form 70% and the finished leather upto 100

The advantages of processing the raw hides locally is too patent to require any elaboration. It is therefore the intention of the government to put a complete and total ban on exports of raw hides. 4 major pickling plants with a total processing capacity of 5.1 million skins per annum will be established in Hargeisa, Burao, Mogadishu and Bardere. The capacity of these plants is given below:

| **Location** | **Capacity (in million skins)** | **Investment (in million So. Shs.)** |
|---|---|---|
| Hargeisa . . . . . . . | 2.1 | 1.8 |
| Burao (expansion) . . . | 0.6 | 1.8 |
| Mogadishu . . . . . . . | 1.2 | 1.2 |
| Bardere . . . . . . . . . | 0.6 | 0.8 |
| **Total** | **5.1** | **4.6** |

The investment on the project will be So. Shs. 4.6 million. It is the intention of the government that processing of skins into technologically more sophisticated varieties of finished leather will be undertaken in a phased programme of development.

## 18. **Paper and Paper Board:**

At present the entire requirements of paper and paper board are imported to meet the demand of 15,000 tons a year at a value of So. Shs. 24.3 million. The requirements are estimated to increase to 24,300 tons in 1978 and at present level of prices will cost So. Shs. 56.0 million. Paper and paper board can be manufactured from bagasse, an important by-product of sugar factories. The plant should preferably be located in the vicinity of the sugar factory complex in order to avoid unnecessary transportation costs of the bulky bagasse. A sugar mill of 50,000 tons output can supply about 123,000 tons of bagasse. Even after part of bagasse is used as fuel for generation of the sugar factory, considerable quantities could still be spared for paper production. It is estimated that a paper and paper board factory of 15,000 tons output per annum could be supported by a sugar complex of 50,000 tons output.

The paper industry is a sophisticated industry. The pattern of productoin costs varies according to the process adopted, the size of plant and its location. A medium sized plant of 30 tons capacity per day (viz 15,000 tons per year) is feasible with NSSC process neutral sulphite process) for bleached variety and with the recovery of chemicals. The project for paper and paper boards will be developed in connection with the expansion of Jowhar sugar factory and the proposed new factory in Lower Juba.

The total investment required for the establishment of the project is So. Shs. 75.0 million and the foreign exchange component is So. Shs. 52.5 million.

The total employment potential (3 shifts) of the project is 542.

## 19. **Fish Meal Plants:**

New facilities for processing fish waste need to be created along the coast at suitable locations depending on the availability of fish waste, power and other facilities. Out of the planned catch of 20,000 tons of fish to be used by the processing factories a minimum of 12,000 to 14,000 tons of waste may be generated. Apart from fully utilising the existing facilities at Laskorey it will be necessary to set up three fish meal plants in the vicinity of other processing units at Bolimog, Habo and Kandala on private basis and at a cost of So. Shs. 3.0 million each to process the fish waste which will become available.

## 20. Manufacture of Fishing Gear:

The creation of a coastal fleet of 250 motor boats and 50 fishing vessels and the establishment of 20 development centers would demand substantial quantity of fishing gear which would normally have to be imported. Dependence on foreign markets for the supply of fishing gear and equipment often leads to unforeseen delays in delivery of these items. In order to ensure timely delivery and to save hard currency, it is essential that at least part of the fishin g gear is manufactured locally. The Programme therefore envisages the establishment of facilities for the manufacture of fishing gear locally. An investment of So. Shs. 1.0 million is proposed for this purpose.

## 21. Cement Factory:

A technical report on the possibilities of constructing a cement factory has supported the feasibiltiy of setting up a plant at Berbera with a capacity to produce 100,000 tons per annum. The estimated investment for the proposed factory and the auxiliary facilities like water supply system, power, communication, geological exploration and mines, and training of personnel etc. is So. Shs. 68.44 million. All the raw material required for the factory viz. limestone (95,000 tons) clay (70,000 tons) gypsum (3,000 tons) are located in the Berbera (Bihindule) District and the factory will be established in an area close to the raw materials to minimise transport costs. The details of technical equipment and supplies as well as the work plan for construction and commissioning will be finalised during the first half of 1974. The foreign exchange requirement is estimated at So. Shs. 35 million.

## 22. Pharmaceutical Institute:

A small pharmaceutical institute has been in operation in the country for sometime and has been producing some vitamins and a limited number of drugs and medicaments. The experience gained from this plant shows that considerable savings can be made by local production of medicine. The importance attached to the maintenance of a healthy society also warrants the development of a full-fledged pharmaceutical centre to enlarge and diversify the scope of work of the existing institute.

The project will aim at the replacement of imports of drugs and consequently to export the surplus abroad. The total investment on the project is So. Shs. 16.00 million and it will employ 104 persons.

## 25. Development of Salt Works:

Salt is in a great demand in the world over for human and animal consumption or for industrial processing. In Somalia itself the hides and skins development centres, fishing industry, meat and fish canning plants are few of the industrial plants that require large quantities of salt. The climatical and geological conditions for efficient production of salt are available in the country.

At present salt production is carried out in a number of places both in the coastal areas and inland, but the mode of production is primitive and requires immediate improvement in techniques to increase the output and to reduce cost of production to enable the country to export this commodity.

The rate of production per basin varies. In the Red sea area during the hot season production is 60,000 quintals of salt every 10 days, but only 20,000 quintals in the wet season during a comparable period. In the Indian ocean corresponding production rates are 20,000 and 12,000 quintals during the different seasons.

During the Programme period, intervention in salt development will be confined to the following areas:

| District | No. of Salt Basins | Investment |
|---|---|---|
| Merca . . . . . . . . | 30 | 850,200 |
| Kismayu . . . . . . . | 60 | 1,724,400 |
| Zeila . . . . . . . . | 80 | 2,271,200 |
| Berbera . . . . . . . | 30 | 850,000 |
| **Total:** | **200** | **5,695,800** |

Full encouragement and assistance will also be given to the expansion and modernisation of the salt works in Gazira near Mogadishu and other fisheries centres in the Gulf.

## 24. Small Scale and Handicrafts industry:

While the objective of the government is to establish modern technology based industries for export promotion, it is clear that such an objective cannot be achieved overnight. Technology is a process of development. It demands large investments and requires trained and experienced technicians. On both accounts Somalia is not well placed. Modern industrial establishments are less labour intensive and their impact on employment is less favourable compared with medium and small scale industries. On the other hand traditional and small scale industries in Somalia, though labour intensive and involve much less investment have not been able to provide economic wages to workers and have failed to be a spring-board for developing sophisticated technology-based industries. There is therefore need to transform units in the traditional and small scale industries into viable units by combining their individual capability which will in turn enable them to benefit from modern technology, economic production and large gainful employment.

During the Programme period, government intervention in the development of small scale industries and handicraft would be carried out along the following lines:

### (a) Studies and Guidance:

The private sector has investible funds which have to be gainfully employed for productive investments. It is the intention of the government to intensify its efforts to provide basic studies on industrial opportunities and to render technical and advisory services for promotion and guidance of small scale industrial units. The aim of this service is to make known to future investors the opportunities that exist in dustry, and and to give them confidence by taking up new ventures by demarcating specific areas and projects for the private sector.

### (b) Financial Assistance:

Existing establishments and prospective investors will require loan finance from government institutions to supplement their resources for expanding the capacity and for starting new units. It is the policy of the government to provide small scale industry units with loans under convenient terms and conditions. These loans will be available for the construction of factory buildings and purchase of machinery and equipment.

Assistance in obtaining working capital for advances for purchase of raw materials, stocking of finished goods prior to sale and for payment of wages will also be provided.

### (c) Integrated Services:

In addition to loans for financing the purchase of fixed assets and to meet working capital needs, the medium and small scale industry will require services of various kinds such as help in procuring raw materials at reasonable prices and advice and assistance in introducing appropriate technology. Establishment of an integrated service, which would provide these services for both medium and small scale industries as well as traditional small industries and handicrafts would be pivotal to the whole development programme. An item of urgent need in this context is a programme for construction of worksheds in small clusters arranged in the form of cooperatives of handloom weavers, blacksmiths, shoemakers, furniture makers etc. This will enable them to pool their resources, exchange information, supplement each other and provide an effective base for government injection of assistance and guidance.

### (d) Handicrafts:

Development of small industries producing artistic goods or handicrafts require additional consideration. Market for the products of these industries with their present design, workmanship and finish is limited, both abroad and at home. Opening of emporia and sales depots to help in increasing their sales are of limited value unless efforts are made to improve design, workmanship and finish of the products. The promotional effort would have to be organised on industry bases for selected handicrafts. In addition to the development of worksheds, provision of substantial grants and subsidies to the traditional industries to boost their production and to acquaint them with improved methods will be given.

During the Programme period, a total investment of So. Shs. 19 million will be made for the development of small scale and traditional industries. This investment will make it possible to provide loan assistance to 50 borrowers for purchase of machinery and equipment, to 50 borrowers for working capital and construction of 10 integrated service centres for small scale industries. In respect of traditional industries and handichafts, the Programme envisages construction of 1,000 worksheds, assistance to 1,000 artisans for purchase of tools and equipment and supply 1,000 more with working capital.

## 25 Building Materials and Ceramic Household Utensils:

There are occurences of silicate materials in the Northern parts of the country which are substantial in both quantity and quality and it is expected that the raw materials for industries like asbestos roofing sheets, sanitary ceramics, ceramic household utensils and floor and wall tiles will be obtained in commercial quantities for meeting the local demand as well as for export. The exact quantities of these reserves however are not known and geological investigations to determine the quantity of the deposits will be carried out during 1974 and 1975. If local sources can supply at least 60% of the raw materials the following projects will be implemented during the Programme period.

### (a) Asbestos - Cement Roofing and Pipes Project:

Most of the roofing materials used for urban building in Somalia are corrugated iron sincated sheets and asbestos - cement roofing sheets which are all imported. The estimated demand for roofing materials is 499,4273 m$^2$ in 1972 and 645,562 m$^2$ in 1978. These requirements cover the needs for the new housing programme and do not take into account the needs for replacing the existing roofing materials. The total annual demand for roofing and pipes materials is therefore estimated at 1,800,000 m$^2$ in the Programme period.

### (b) Sanitary Ceramics:

The estimated needs for sanitary ceramics such as sinks, wash basins, water closet pans in 1974 are 16,595 pieces and 22,278 pieces in 1978. The high price of imported materials has inhabited the demand for sanitary ceramics and forced most of the house owners to use unhygienic but less expensive materials as a substitute. With the improved housing standards the demand for sanitary wares will increase.

### (c) Ceramic Household Utensils:

There are occurrences of all necessary raw materials for the manufacture of ceramic household utensils which are all imported at present. The total imports of these materials including glassware has been 226,683 kg. and 547,937 kg. in 1971 and 1972 respectively, involving foreign exchange expenditure of So. Shs. 1.6 million and So. Shs. 1.4 respectively.

(d) **Floor and Wall Tiles:**

In Somalia terrazzo tiles are used mainly for floors and a limited quantity for ceramic floors and wall tiles. Because of the high prices of imported tiles, the import is low. In the period 1967-1971 the average yearly imports was 360 tons (260 tons or 5200 sq. m. terrazzo tiles for 500 sq.m. ceramic tiles). In 1972, 507 tons of terrazzo tiles for So. Shs. 1,622,000 and 890 tons ceramic tiles for So. Shs. 1,349,000 were imported. Besides these imports, there is a local manufacture of 20,000 sq.m. terrazzo tiles in Mogadishu. With the improvement of the standard of housing, the demand for floor and wall tiles will rapidly rise. The estimated demand in 1974 is 117,634 sq.m. and in 1978 156,849 sq.m.

In pursuance of the policy of encouraging the private sector to play a positive role in the field of industrialisation, the following categories have been reserved for implementation by the private sector:

**List of light industries permitted to be established**

**in the private sector during the Programme period 1974-1978**

| Sr. No. | Name of Project | Localion | Expected Year of implementation 1974 | 1975 |
|---|---|---|---|---|
| 1. | Paints plant | Mogadishu | | x |
| 2. | Terrazzo tiles plant | » | | x |
| 3. | Manufacture of batteries for radios and vehicles | » | | x |
| 4. | Toilet soap plant | » | x | |
| 5. | Nails factory | » | x | |
| 6. | Manufacture of sacks | » | | x |
| 7. | Beverage plant | Hargeisa | x | |
| 8. | Tannery | » | x | |
| 9. | Garment manufacturing unit (permission not given yet) | Mogadishu | x | |

**SECTOR: Industry**

## DEVELOPMENT PROGRAMME 1974-1978
## PROJECT COSTS

(So. Shillings)

| Sl. No. | PROJECTS | PLANNED OUTLAY | | | | | |
|---|---|---|---|---|---|---|---|
| | | 1974-78 | 1974 | 1975 | 1976 | 1977 | 1978 |
| 1. | Somaltex - Balad | 96,150,000 | 27,000,000 | 69,150,000 | — | — | — |
| 2. | SNAI - Jowhar | 40,000,000 | 20,000,000 | 20,000,000 | — | — | — |
| 3. | Milk Factory | 5,000,000 | 2,000,000 | 1,400,000 | 1,100,000 | 50,000 | — |
| 4. | Laskorey Fish Cannery | 6,500,000 | 1,000,000 | 2,500,000 | 3,000,000 | — | — |
| 5. | Meat Factory - Kismayu | 3,000,000 | 2,000,000 | 1,000,000 | — | — | — |
| 7. | Boat Building Yards | 5,500,000 | 1,000,000 | 1,500,000 | 1,500,000 | 1,500,000 | — |
| 9. | Foundry | 12,320,000 | 5,000,000 | 2,620,000 | — | 2,000,000 | 2,700,000 |
| 10. | Gypsum Pilot Plant | 2,320,000 | 1,000,000 | 1,320,000 | — | — | — |
| 11. | Oil Refinery | 54,000,000 | 2,500,000 | — | — | 3,500,000 | — |
| 12. | Oil Mills and Extraction units | 6,000,000 | — | — | 49,000,000 | 49,000,000 | 49,000,000 |
| 13. | New Sugar Complex | 137,000,000 | — | — | 49,000 000 | 49,000 000 | 49,000,000 |

**SECTOR: Industry**

## DEVELOPMENT PROGRAMME 1974-1978
## PROJECT COSTS

(So. Shillings)

| Sl. No. | PROJECTS | PLANNED AUTLAY | | | | | |
|---|---|---|---|---|---|---|---|
| 14. | Flour-Cum-Pasta Mill . . . . . . . . . | 15,000,000 | 10,000.000 | 5,000,000 | — | — | — |
| 15. | Slaughter House Hargeisa . . . . . . . | 3,200,000 | — | 2,000,000 | 1,200,000 | — | — |
| 16. | Mogadishu slaughter house . . . . . . | 1.171,760 | 1,171,760 | — | — | — | — |
| 17. | Hides and Skins Development . . . . | 7,000,000 | 1,800,000 | 1,800,000 | 1,200,000 | 0,800,000 | 1,400,000 |
| 18. | Paper and Paper Board . . . . . . . . | 75,000,000 | — | — | 15,000,000 | 30,000,000 | 30,000,000 |
| 19. | Fish meal plants . . . . . . . . . . | 3,000,000 | 1,000,000 | — | 1,000,000 | 1,000,000 | — |
| 20. | Manufacture of fishing gear . . . . . | 1,000,000 | 0,500,000 | 0,500,000 | — | — | — |
| 21. | Cement factory . . . . . . . . . . . | 68,400,000 | 22,800,000 | 22,800,000 | 22,800,000 | — | — |
| 22. | Pharmaceutical Institute . . . . . . . | 16,000,000 | 3,000,000 | 8,000,000 | 5,000,000 | — | — |
| 23. | Salt Works . . . . . . . . . . . . . | 5,695,800 | 2,271,200 | 1,724,400 | 850,000 | 850,000 | — |
| 24. | Small scale Industries & Handicrafts . . | 15,000,000 | 3,000,000 | 3,000,000 | 3,000,000 | 3,000,000 | 3,000,000 |
| | **TOTAL** . . . . . . | 588,257,560 | 107,042,960 | 144,314,400 | 118,650,000 | 112,150,200 | 106,100,000 |

## IX Transport and Communication

### Objectives and Strategy.

The objectives of development of transport and communication sector in Somalia are:

i) To open new areas for development in order to increase the productive capacity of the economy;

ii) To foster integration by creating homogeneous markets by eliminating the small market pockets that have emerged in the colonial periods;

iii) To facilitate movement of goods and services by land, sea and air within the country most cheaply, stamping out the glaring disparity between towns and rural areas in the availability of goods and their prices;

iv) To establish efficient and reliable communication within the country and with the rest of the world for dispersion of information and for promotion of prompt contacts at the national and international levels;

v) To improve the postal services in an effort commensurate with the sharp increase in literacy ushered in by the adoption of the national script.

In building a socialist system transport and communication is a vital means and a vehicle for reaching the people through dispersion of information, facilitating government intervention in promoting balanced development. The strategy of the Programme is to close the essential gaps in the sector; orient the basic objectives of transport and communication to the development of internal trade and creation of favourable conditions for regional interdependence and complimentarity.

During the Programme period, the total macadamized road mileage will increase by 1,711 km. about 140 km will be rehabilitated. The following road construction projects will be completed by 1978:

Hargeisa/Berbera, Burao/Beletwein, Golwein/Gelib, Burao/Berbera, Hargeisa/Borama, Arara/Jamama and Coriolei/Danow. The resurfacing of Jowhar/Bulo-Burti and Afgoi/Shalambot roads will also be completed.

Construction of bridges at Burao, Jalalaqsi, Beletwein, Bardhere, Afgoi, and Jowhar will be carried out. The construction unit in the Ministry of Public Works which was created for establishing an effective machinery to improvise and design the kind of roads which are more in line with the national economy and ecological peculiarities of the country will be strangthened. The Programme envisages an intensive programme of feeder roads construction in order to make the maximum returns out of the large investments in road development. The central authorities, regional governments and the people will cooperate in the development of these roads. Major investment will be made in strengthening the transport service at the centre, regional and district level. The Programme also foresees the completion of the Mogadishu harbour and improvement in existing harbours to raise their efficiency. Relocation of the Mogadishu International Airport will be fully investigated, improvement of Hargeisa's airport to facilitate the export of carcass meat and strengthening the national airlines will also be carried out. The Programme envisages the establishment of a shipping fleet, which will involve the purchase of livestock and banana carriers.

The continuing telecommunication project will go a long way in establishing a modern network in the country and the project will be completed, in 1974. It is also planned to close the glaring telecommunication gap in the rest of the country north of Jowhar and Upper Juba regions.

In order to accomodate the large urbanization programme of the capital, the Mogadishu telephone network will further be extended by 2,000 lines and the manual exchanges installed in Hargeisa and Kismayu will be reallocated to other towns.

Modest investments will be made to strengthen the postal services and to establish a postal savings bank which will aim at mopping up small savings. The Programme envisages the establishment of a civil aviation school to up-grade and train the staff involved in the civil aviation, meteorological and postal servcies. The plan also envisages the development of a meteorological wing which will cater not only to the civil aviation requirements, but also to agriculture requirements.

### Performance of the 1971-1973 Development Programme.

Investment in transport and communication is normally large and because of the nature of the sector, projects take a long time to be completed. This is more so when, because of limited resources and absence of institutions to carry out construction work, the buik of the investment is expected from foreign countries and institutions. The Development Programme 1971-1973 did not take fully into account these basic constraints to project implementation. Progress was not, however, disheartening. All the projects in the Programme were started, albeit with certain delays. The delay in starting projects such as the Mogadishu harbour, Arara-Gamama-Camsuma road and telecommunication development has been due to technical modifications introduced in them after the preparation of the programme.

The following table shows the performance of the 1971-1973 Development Programme in financial terms.

### Progress of the 1971-1973 Development Programme

### (Investment in So. Shs.)

| | |
|---|---|
| 1. Highway Development Project | 6,761,682.00 |
| 2. Afgoi/Baidoa Road | 10,600,000.00 |
| 3. Hargeisa/Berbera | 20,200,000.00 |
| 4. Jowhar/Bulo-Burti | 8,000,000.00 |
| 5. Beletwein/Burao | 24,000,000.00 |
| 6. Roads Crash Programme | 3,000,000.00 |
| 7. Transport Equipment | 3,000,000.00 |
| 8. Government Transport | 22,960,000.00 |
| 9. Bus Service in Mogadishu | 1,800,000.00 |
| 10. Studies | 1,669,465.00 |
| 11. Mogadishu Harbour | 32,719,460.00 |
| 12. Kismayu Airport | 14,000,000.00 |
| 13. Baidoa Airpot | 2,000,000.00 |
| 14. Fire Extinguishers | 1,946,000.00 |
| 15. Postal Headquarters | 2,000,000.00 |
| 16. Telephone Network extension, Mogadishu | 900,000.00 |
| 17. Met. Services | 1,608,000.00 |
| 18. Telex Service | 938,000.00 |
| 19. Telecommunication Service | 27,386,168.00 |
| 20. Flight information Centre | 5,399,380.00 |
| **Total investment:** | **190,888,155.00** |

The total investment made between 1971-1973 was So. Shs. 190.888 milloin. Out of this So. Shs. 101,991 million has been spent in the field of transport. The projects included were the continuation of the Highway Development Project and the Roads Crash Programme project, completion of Afgoi-Baidoa road, initiation of the construction of the Jowhar Bulo-Burti and Beletwein-Burao roads. Other projects such as highway equipment, strengthening of general transport services and the establishment of a public service transport for Mogadishu have been undertaken and engineering studies of Golwein/Gelib has been initiated. So. Shs. 50.665 million has been spent in the initiation of projects of Mogadishu harbour and Kismayu airport and the completion of Baidoa airport and fire protection projects. In the field of communication, an investment of So. Shs. 38.232 million has been made, covering the completion of postal headquarters, establishment of a meteorological service, telex printer service, flight informatoin centre and the initiation of the telecommunication and Mogadishu telephone expansion projects. The Programme envisaged the establishment of a national shipping line. An autonomous agency has been created which is now actively pursuing the purchase of a number of ships.

## Transport and Communication: 1974-1978

### 1. Roads.

### A. Spill-over Projects.

The Programme envisages the continuation and completion of the projects for Hargeisa-Berbera, Beletwein-Burao, Arara-Gamama roads, and engineering designs in respect of Burao-Berbera, Golwein-Gelib and Hargeisa-Borama roads. The financial resources for these projects have already been secured.

i) **Highway Development:** The project which was studied in 1965 involved the development of highway department, provision of road equipment, maintenance programme and training of personnel. The first and the second phases of the project have been completed but because of a delay in the arrival of certain machinery, the project has been extended upto 1974. The objective of the prospect is to, advise government on administrative and organisational measures and to complete the training programme. So. Shs. 1.321 million for 1974. The construction unit project will take over the responsibility of this project beyond 1974.

ii) **Hargeisa-Berbera:** The project financed through a long term credit from the International Development Assocaition and the African Development Bank, involves the pavement of a some of 158 km. linking Berbera, the most important outlet for the livestock export, with its main hinderland. The construction of the road commenced in 1972 and 79 km. of it have been completed. The total investment made until the end of 1973 is So. Shs. 20.2 million and the project is scheduled for completion in 1974 and So. Shs. 31.677 million is earmarked for its completion.

iii) **Beletwein-Burao Road:** The road is the longest thorough-fare linking Mogadishu with Burao; the road between Mogadishu and Beletwein is also being improved. It is about 1,045 km. in length and will go a long way in fostering integration and creating a homogeneous market eliminating the small market pockets that have developed in the absence of a unified and integrated national market in the country. The construction of the road commenced in 1972 after intensive preparatory and design work have been completed. Most of the construction machinery has already been transported to site. The investment by the end of 1973 is estimated at So. Shs. 24.0 million. It is envisaged that So. Shs. 387.0 million will be utilised during the Programme period to complete the work.

iv) **Arara-Gamama Road:** Conditions of transport in the area are difficult due to unpaved existing roads. The nature of the ground is heavy black cotton soil and the traffic movement is difficult, if not impossible during the rainy season. The construction of the road which will serve the east bank of the Juba river will facilitate the synchronization of the flow of banana with the availability of ships at the Kismayu harbour. Hence the major objective of the road are to open up new land for agricultural development in Arara and Gamama and to contribute to the reduction of the transport cost of banana, enhancing its competitiveness in world market. The project construction will commence and be completed in 1974. Total cost of the project is So. Shs. 5.45 million.

v) **Jowhar-Bulo-Burti:** The resurfacing works of this dilapitated section of the Mogadishu-FerFer truck road was entrusted to the construction unit of the Highway Department. In view of the other activities of the unit in Baidoa and the increased share it has taken in the development of municipal roads in Mogadishu, together with the shortage of adequate machinery to cope with all these construction works, progress on this road was rather slow and behind schedule. By the end of 1973, work on 95 km. has been completed and So. Shs. 8.0 million has been invested. The remaining portion of the stretch will be completed in 1974. So. Shs. 2.01 million is earmarked for this purpose.

v.) **Afgoi-Shalambot Road:** The construction of this road was completed in 1966 and as its base course was from stablized material, its bearing capacity could not stand the heavy traffic it has been handling ever since its completion. The deterioration of the road was beyond the limits of maintenance practices. It was therefore decided to carry out a complete resurfacing of the road. So. Shs. 4.4 million was set aside for this work and an investment So. Shs. 3.1 million will be made mainly for the purchase of heavy machinery and the initiation of the resurfacing works. The project is scheduled for completion in 1974.

vii) **Engineering Studies:** The engineering studies of the following important roads have been initiated in 1973 and will be connued:

a) Gelib-Golwein;

b) Hargeisa-Borama and transport plan;

c) Burao-Berbera.

Full feasibility studies and engineering designs of the projects will be completed in 1975. So. Shs. 11.80 million has been approved for the three projects. All the contracts have been finalised and the studies commenced. So. Shs. 1.669 million has been spent by 1973 and the balance is scheduled to be fully utilised in 1974 and 1975.

viii) **Roads Crash Programme:** There are two important aspects in which the Roads Crash Programme is playnig a vital role in road development. For one thing the large number of gravel and earth roads need constant attention and a reliable unit to maintain and to keep them in serviceable condition. The other aspect is the development of feeder roads. The full benefit of first class, macadamized roads will not be reaped without the concommitant development of a network of feeder roads. This last aspect has been largely left to the benefaciaries, but in most of the agricultural land, because of the nature of the soil, feeder roads development proved to be too big a job for the slender manpower and material resources of the local governments. is therefore essential to enlarge the scope of the roads crash programme. During the Programme period So. Shs. 10.6 million is earmarked for the project.

B. **New Projects.**

i) **Rehabilitation and Construction Unit**: Construction of roads an expensive undertaking. Upto now Somalia has been depending totally on foreign companies to carry out the transport development. This has more than one disadvantage. For one thing the international standards for road construction seem to be a luxury under the Somalia condictions, but no reputable international construction company will take up a second grade road construction works. Another factor is the cost of development. Foreign firms using highly sophisticated machinery and top level technicians carry a rather too expensive bill for the slender resources of a country such as Somalia. The training element is also crucial. Foreign contracting firms are bound to train nationals. They have neither the time nor the willingness to do so.

In the light of these basic problems and because of the fact that transport development will for quite sometime call for a greater share of the national resources, it is incumbent upon the government to set up a road rehabilitation and construction unit. The nucleus of such a unit has already been established but needs substantial investment in equipment and machinery and trained manpower. So. Sh. 16.8 million will be appropriated for the unit to purchase the necessary machinery. The works which the unit will have to undertake are numerous and it cannot physically or financially cope up with all of them simultaneously. The unit is at present engaged in the resurfacing works of the Jowhar-Bulo-Burti road which will be continued during 1974. It will also play a major role in the development of municipal roads.

ii) **Danow-Coriole Road:** The Danow-Coriole area is one of the important grain belts in the country. The area is served by an earth road which is impassable during the rainy season. With a traffic volume of 250 vehicles a day mostly of large trucks, the improvement of the road commands high priority

50 per cent of the road runs parallel to the right bank of the Shabelle River and its carriage way is below the maximum flood level of the river. A new road eliminating this inconvenience is required. A road alignment having the following technical data will be constructed: embankment 1.5 cm. sub-base 40 cm. base 15 5cm. with double surface treatment. 4 culverts will also be constructed. Total cost of the project is So. Shs. 2.25 million. The construction of the road will be carried out by the construction unit.

iii) **Hargeisa-Borama Road 150 km.:** The feasibility study and the engineering design of this road will be completed in early 1975. Subsequent construction of the road will be commenced in 1976 and completed in 1978. The project constitutes an important link for the agricultural belt of west of Hargeisa with its natural markets at Hargeisa, Berbera and Burao. The project also involves the development of a spur to Tug-Wajaleh. The total cost of construction and supervision is So. Shs. 42.0 million.

v) **Golwein-Gelib Road 270 km.:** The Golwein-Gelib road will fill an important gap in the transport network in the country, linking Mogadishu and Kismayu. The road will open up large areas of agricultural potential which are at present inaccessible during the rainy seasons and in which non-availability of essential services has been mainly due to lack of a reliable road network. The engineering design of the road is now being carried out and will be completed in 1975. The construction of road is scheduled to commence in 1975 and completed in 1978. It is estimated to cost about So. Shs. 108.000 million.

vi) **Berbera-Burao Road 140 km.:** The road links Berbera by far the largest livestock outlet, with its main livestock hinderland. The shortage of forage and water and the scorching heat of Berbera force livestock traders to herd their flock in the highlands and make a rush to Berbera when ships call, leaving much to be desired in the coordination of livestock flow for shipment and availability of ships. Total cost of the project is So. Shs. 55.0 million. The construction of the road is scheduled to commence in 1976, after the basic engineering design is completed. The road alignment will basically follow the existing track with possible alterations to fit in with the industrial and mineral development in the area. The road is scheduled for completion in 1978.

vii) **Bridges:** The construction of a large number of road networks necessitates the development of bridges and culverts, especially in areas where movement of goods and services is hampered by natural barriers such as rivers and large seasonal waterways. An important consideration for bridges development is the need for eliminating the isolation which large segments of the agricultural belt is facing which precludes their development. During the Programme period a total investment of So. Shs. 11.839 million will be made for the development of six major bridges at Beletweni, Jalalaqsi, Jowhar, Bardere, Afgoi and Burao.

viii) **Government Transport:** In an effort to free the Government administration from its immobility and concentration in urban settlements, an investment of So. Shs. 23.226 million is earmarked for the purchase of adequate number of supervisory vehicles and heavy duty trucks, primarily for the regional centres and district level. A further investment of So. Shs. 3.0 million will be made for the construction of a central workshop in Mogadishu for servicing the government vehicles. This workshop will plan the additional requirements of the regional workshops which have been established during 1971-1973 and advise the government on standardisation of vehicles.

## 2. Harbours and Airports:

### A. Spill-over Projects:

i) **Kismayu airport:** The airport construction has been commissioned in 1972. The new airport is designed to provide a modern runway capable of accommodating large planes like the Boeing 707, a service road of about 12 km. connecting the airport with the city, an air terminal and administrative blocks and essential navigational aids, telecommunication and fire extinguishing services. The project aims at providing vital support to the development of livestock, agriculture and tourism in the Lower Juba Region. The total cost of the project is So. Shs. 22.803 million. During the 1971-1973 Programme period So. Shs. 14.0 million was invested and the balance is scheduled to be utilized in 1974.

ii) **Mogadishu Harbour:** The project as finally approved consists of 770 m. breakwaters, three berths, a dolphin berth for mooring livestock vessels, a marshalling yard for livestock, an access road, paved areas, two transit sheds, a warehouse, auxiliary building, and cargo handling equipment. The total cost of construction of the project is So. Shs. 155.75 million of which a sum of So. Shs. 32.0 million has already been spent till the end of 1973. The balance is scheduled to be fully utilised during the period 1974-1976. The project will meet the long outstanding need in harbour improvement which has arisen out of the absence of a modern harbour between Berbera and Kismayu, a distance of 2,000 km. and it will eliminate the current rate of loss and damage to shipments and inconvenience to shippers.

**New Projects:**

i) **Mogadishu International Airport:** The existing airport of Mogadishu is only 2,500 metres long. It is located in an unsuitable site as it is only about 6 km. from the centre of the city. Extension of the run-way cannot be carried out because of absence of enough land. Statistics indicate a contniued growth in traffic and with future development of the city and the surrounding areas, traffic projection indicates the necessity for an alternative site for the airport. Such a site has already been located and reserved. The project envisages full investigation into the technical question regarding relocation of the airport.

ii) **Hargeisa Airport** is the second most important airstrip in the country and services Viscount planes to Djabouti and Aden. The run-way is in a good condition and the site most favourable. The present run-way however, suffers from longitudinal deficiencies (too much undulations and slopes) and its expansion will serve no purpose unless broken and reconstructed properly to confirm to international standards. In view of these deficiencies and because of the development requirement for improved run-way, a parallel run-way with the present one will be constructed. So. Shs. 19.0 million is earmarked for this purpose.

iii) **Other Airports:** The airports of Burao, Galkayo, Garowe, Erigabo and Bosasso are also important airstrips that need improvement. Work on these airports will have to be taken up as when financial resources are available.

iv) **Civil Aviation Training School:** Civil Aviation and meteorolcgical equipment become more and more complex and procedures more complicated. The personnel who handle, maintain and service the equipments, as well as those using them should possess a high standard of training and skill, knowledge and proficiency which cannot be acquired overnight. It needs ardous work backed by a well equipped institution to upgrade the quality of work of existing personnel and train new ones. A considerable amount of modern equipment secured at a high cost and radio navigational aids. These investments must now be supported with training programme to ensure their efficient operation and maintenance. The syllabus of the technical schools and poly-technic institutions will need to be diversified to cover the kind of training facilities required by the aviation and meteorological services. So. Shs. 785,000 out of which So. Shs. 380,000 will be received in grant, is earmarked for training programmes of air-traffic controllers, air telecommunication technicians, radio maintenance technicians, fire and meterological personnel.

v) **Meteorological Development:** Weather and climate are important factors that have far influence on the economy. The country must maintain a national meteorological service, the responsibilities of which are to provide meteorological advice and information for use at both planning and operational stages of economic activities. During the Programme period, improvement of the meteorological instruments at observing stations will be undertaken through this project by providing instruments required by the regional basic synoptic stations to make them fully operational. At present synoptic stations are located at Hargeisa, Burao, Bosasso, Alula, Galkayo, Hobyo, Beletweni, Kismayu and Berbera. The following stations will be equipped with SSB during the Programme period: Bardere, Baidoa, Eil-Bur, Iskushuban, Gardo, Erigabo, Borama and Lasanod. This will enable reliable and regular collection of reports from meteorological stations and telecommunication network throughout the country and diversify the activity of the meteorological services which have been set up originally for the use of civil aviation purposes. Furthermore a laboratory for caliberation will be installed to meet the need for maintenance of electronic equipment. So. Shs. 794,000 is provided for development of meteorological services.

vi) **Improvement of Existnig Seaports:** The major harbours of Mogadishu, Kismayu and Berbera and the minor ports along the 2,800 miles coastline of the country need improvements in order to make their operations more efficient. Some of the improvements required are of a long term nature and involve studies and investigations which will take sometime. Establishment of bunkering facilities in Mogadishu, Kismayu and Berbera ports and the possibility of developing limited free port facilities in Berbera are some of the questions which need to be enquired into. These studies will be carried out during the Programme period and future investments will be allocated on the basis of the results of these investigations.

There are, however, urgent improvements which have to be undertaken immediately. These improvements involve the purchase of two mobile cranes for Berbera port and a dredger for Kismayu. Somalia has, by virtue of having one of the longest coastline in Africa, international commitments to ensure the safety of life and property in its territorial waters. This obligation involves maintenance of light houses along the coasts, provision of meteorological and other information to ships plying the Gulf of Aden and Indian Ocean and the organisation of rescue operations in case of accidents to ships in the high seas. The proposed improvements will be coordinated with the development programme of the Ministry of Transport and communication.

The investment required for the improvement of ports and marine services will be:

| | | | |
|---|---|---|---|
| 2 mobile cranes | So. | Shs, | 1,000,000.00 |
| 1 Dredger | » | » | 5,000,000.00 |
| 2 Motor Boats | » | » | 550,000.00 |
| 1 Tug-Boat | » | » | 3,500,000.00 |
| **Total** | » | » | **10,050,000.00** |

vii) **Somali Airlines:** The national airline which was established in 1964 with 3 DC-3 aircrafts for internal transport has added to its fleet two Viscount aircrafts between 1968 and 1969. The airline serves 17 airports in the country and operates international services to Nairobi, Dar-Es-Salaam, Aden and Djibouti. The airlines also extends its services to jeeddah during the Haj season. Because of the inadequacy of airports, the sparsity of settlements, the smallness of freight transport and absence of tourism, the airline has been working at a financial loss. The services it renders cannot however be measured solely on an accounting basis. It has a social significance which is not fully reflected in these accounts. The modernisation of the Kismayu airport, the envisaged improvement to Hargeisa's and the re-allocation of Mogadishu's will go a long way to provide the airline with more modern facilities to operate.

Efforts will be made to find a type of aircraft which would replace both type of aircrafts now in operation and which will raise the rate of utilization of the aircrats to economically and socially acceptable level, and which at the same time will operate on unimproved air-fields of the country. The Somali airlines will begin the modernisation programme by chartering Boeing 720 planes to replace the Viscounts and enlarge its coverage to the Gulf and Europe.

viii) **National Shipping Line:** For a country like Somalia with its export trade in live animals, banana, etc. the possession of a national merchant marine is likely to assist economic development.

The livestock export suffers from lack of suitable carriers, while its banana industry is rendered incompetitive in a large measure because of absence of modern and faster ships on the one hand, and the high sea transport cost on the other. The long coastal stretch of the country makes it vulnerable in terms of security.

In addition, local producers in search of new and expanding markets have to depend on a sea transport system sympathetic to their interests. The establishment of a national shipping line is therefore an effective instrument of trade promotion. It provides employment directly as well as indirectly through invisible exports, and provides employment directly as well as indirectly through the creation of auxiliary trade and industries. It is for these reasons that the programme envisages to undertake intensive research as to how best the establishment of a national, shipping line could be carried out. So. Shs. 50.0 million is earmarked for the project.

## 3. Communication.

### A. Spill-over Project:

i) **Telecommunication Project:** The Development Programme 1971-1973, envisaged the development of a telecommunication network in the country, covering internal and international connections and the establishment of modern telephone exchanges in Hargeisa and Kismayu. Because of the long delay in execution of the projects and the rapid rising of prices of equipments, the projects have now to be modified to tailor the facilities to the available funds, areas of Jowhar and Baidoa are provided with H.F. system and the rest with the more sophisticated systems of tropo scatter and line of sight. Hence modern connections is being carried out in Kismayu, Gamama, Gelib, Coriole, Janale, Merca, Afgoi, Jowhar and Balad with Mogadishu which is the centre. While Hargeisa, Berbera, Burao, Bosasso, Galkayo, Beletwein and Baidoa have their links with Mogadishu through H. F. system. Modern telephone exchange will be established at Hargeisa and Kismayu, and international links with Europe and Africa will be established.

The original total cost of the project was So. Shs. 41.25 million for the period of 1971-1973. So. Shs. 27.38 million has been invested. All the major components of the machinery and equipment have been received and the basic structures completed. The installation of the equipment will be done in 1974. So. Shs. 13.87 will be utilised to make the project fully operational. Modest facilities for training the national staff is being established.

The Programme foresees not only the completion of the project in its original form but also seeks to close the telecommunication gap by extending the modern system to the rest of the country north of Jowhar and to Baidoa. It is estimated that So. Shs. 18.0 million will be required for this extension.

ii) **Flight Information Centre:** The project is now in an advanced stage of completion. Equipment have been received and the basic construction works completed. The installation of machinery and equipment will be undertaken in 1974. In the period 1971-1973 So. Shs. 5.4 million has been invested on the project while the installation cost of the machinery as well as some finishing works involving So. Shs. 600,000 will be incurred in 1974. After completion of the project Somalia will not only possess basic communication aids to air traffic at low and high altitudes, but also provide full scale communication aids to air traffic within its airspace, thus meeting its international obligations and also rendering assistance through this vital service to its neighbours.

B. **New Projects:**

1. **Expansion of Mogadishu Telephones:** The existing capacity of the Mogadishu telephone is 3,000. But this capacity, in spite of its recent expansion, cannot accommodate the demand for telephones in the city emanating from the spectacular growth of the city since the Revolution. The active participation of the state in economic and the social transformation of the country requires among other things facilities for prompt contact. The envisaged development of the city of Mogadishu during the Programme period 1974-1978 underscores the need to build the basic services that goes with such development. It is therefore, planned to complete the current expansion and to expand further the telephone network by installing 1,000 additional lines. So. Shs. 7.2 million will be required for this project.

ii) **Postal Services:** There are a number of factors that impede the development of postal services in the country; the high percentage of nomadic population, high rate of illiteracy, sparsity of settlements, lack of basic infrastructure and inadequacy of postal facilities. Since the Revolution a lot has been done to remove some of these impediments. The adoption of Somali script and the extensive literacy campaign carried will reduce sharply the illiteracy rate. The development of roads such as the Beletwein-Burao together with the planned Golwein/Gelib and Hargeisa

Borama will facilitate the increased coverage of the services. Through self help activities, a number of post offices in rented premises have been moved to new government owned quarters and the central post office in Mogadishu has been located in a modern building in the centre of the city.

In order to improve the efficiency of the postal services and extent its coverage to reach the largest possible number of the population, the following programmes will be carried out in 1974-1978 plan:

i) **Mechanisation of Postal Services:** The Mogadishu and Hargeisa post offices will be mechanised by introducing letter sorting, culling, facing and cancelling, post and parcel bundling and postage meter machines.

ii) **Development of Post Offices:** The post offices in Hargeisa, Merca, Burao, Kismayu and Berbera will be reconstructed where the existing ones old and dilapitated. Distrcit post offices will be built on a self-help basis in Garbaharay, Balad, Eilbur, Eildeer, Hordio, Mogadishu, Laskorey, Lughaya, Wajed, Dolo, Jalalqsi, Kansahdheer, Silwak, Yeed, Bulahawa, Giriban, Haredere and Badada.

iii) **Home Delivery System:** Home delivery system will be introduced in Mogadishu and subsequently in Hargeisa and Kismayu.

iv) **Post Savings Bank:** Introduction of postal savings bank is of most importance in tapping the savings in the rural areas. With increased commercialisation of livestock and the price stabilisation measures of sorghum, maize and oil bearing crops, the purchasing power of the rural population have been increased and also their capacity to save. It is therefore, necessary to mop up these investable funds and channel them to productive sectors. The postal savings bank has the advatages of cheapness in operation, extension in coverage and educational value in teaching the virtues of thrift.

In the Programme period, postal savings banks will be established in Mogadishu and Hargeisa.

So. Shs. 2.4 million is allocated to the programme of postal services development.

## SECTOR: Transport and Communication: TOTAL INVESTMENT COST.

(So. Shillings)

| Sl. No. | PROJECTS | 1974-78 | 1974 | 1975 | 1976 | 1977 | 1978 |
|---|---|---|---|---|---|---|---|
| 1. | Highway Development Project . . . . . . | 1,321,000 | 1,321,000 | — | — | — | — |
| 2. | Hargeisa/Berbera Road . . . . . . . . | 31,677,000 | 31,677,000 | — | — | — | — |
| 3. | Burao/Beletwein Road . . . . . . . . | 360,000,000 | 80,000,000 | 80,000,000 | 80,000,000 | 80,000,000 | 40,000,000 |
| 4. | Hargeisa/Borama «Study» . . . . . . | 3,849,388 | 3,643,867 | 205,521 | — | — | — |
| 5. | Burao/Berbera «Study» . . . . . . . | 2,485,290 | 2,000,000 | 1,625,165 | — | — | — |
| 6. | Golwein/Gelib «Study» . . . . . . . | 2,891,105 | 1,265,940 | 1,625,165 | — | — | — |
| 7. | Hargeisa/Borama . . . . . . . . . . | 42,000,000 | — | — | 14,000,000 | 14,000,000 | 14,000,000 |
| 8. | Burao/Berbera . . . . . . . . . . . | 55,000,000 | — | — | 23,000,000 | 16,000,000 | 16,000,000 |
| 9 | Golwein/Gelib . . . . . . . . . . . | 108,000,000 | — | 25,000,000 | 29,000,000 | 29,000,000 | 25,000,000 |
| 10. | Arara/Gamama . . . . . . . . . . . | 5,450,000 | 5,450,000 | — | — | — | — |
| 11. | Afgoi/Shalambot . . . . . . . . . . | 4,100,000 | 4,100,000 | — | — | — | — |
| 12. | Danow/Coriolei . . . . . . . . . . | 2,250,000 | 1,000,000 | 1,250,000 | — | — | — |
| 13. | Chras Programme . . . . . . . . . . | 10,575,800 | 2,115,160 | 2,115,160 | 2,115,160 | 2,115,160 | 2,115,160 |
| 14. | Jowhar/Bulo-Burti . . . . . . . . . | 2,065,000 | 2,065,000 | — | — | — | — |
| 15. | Roads Construction Unit . . . . . . | 16,800,000 | — | 6,800,000 | 10,000,000 | — | — |
| 16. | Transport . . . . . . . . . . . . . | 26,226,160 | 7,690,746 | 4,615,178 | 4,690,746 | 4,690,746 | 4,538,744 |
| 17. | Bridges . . . . . . . . . . . . . . | 11,839,000 | 780,000 | 2,600,000 | 3,779,000 | 3,120,000 | 1,500,000 |
|  | TOTAL . . . . . . . . . | 686,529,743 | 143,108,713 | 124,696,314 | 166,584,906 | 148,925,906 | 103,213,904 |

## DEVELOPMENT PROGRAMME 1974-1978

Airports and Harbours

## PROJECT COSTS

(So. Shillings)

| Sl. No. | PROJECTS | 1974-78 | 1974 | 1975 | 1976 | 1977 | 1978 |
|---|---|---|---|---|---|---|---|
| 18. | Mogadishu Harbour . . . . . . . . . . | 123,750,000 | 53,000,000 | 53,000,000 | 17,750,000 | — | — |
| 19. | Improvement of existing Sea-Ports . . . | 10,050,000 | 550,000 | 1,000,000 | — | 3,500,000 | 5,000,000 |
| 20. | National Shipping Line . . . . . . . . . | 50,000,000 | 50,000,000 | — | — | — | — |
| 21. | Hargeisa Airport . . . . . . . . . . | 19,350,000 | — | 1,000,000 | 10,000,000 | 8,350,000 | — |
| 22. | Kismayu Airport (Completion) . . . . . | 8,803,000 | 8,803,000 | — | — | — | — |
| 23. | Civil Aviation Training . . . . . . . . | 785,000 | 785,000 | — | — | — | — |
| 24. | Meteorological Programme . . . . . . . | 794,000 | — | — | 794,000 | — | — |
| | TOTAL . . . . . . | 213,532,000 | 113,138,000 | 55,000,000 | 28,544,000 | 11,850,000 | 5,000,000 |

## DEVELOPMENT PROGRAMME 1974-1978

## PROJECT COSTS

**Communication and Postal Services**

(So. Shillings)

| Sl. No. | PROJECTS | 1974-78 | 1974 | 1975 | 1976 | 1977 | 1978 |
|---|---|---|---|---|---|---|---|
| 25. | Telecommunication . . . . . . . . . . | 31,870,000 | 13,870,000 | 8,000,000 | 10,000,000 | — | — |
| 26. | Flight Information centre . . . . . . . | 600,000 | 600,000 | — | — | — | — |
| 26. | Expansion of Mogadishu Telephone . . . | 9,765,000 | 9,765,000 | — | — | — | — |
| 28. | Postal Services . . . . . . . . . . . | 2,400,000 | — | 1.400,000 | 500,000 | 500,000 | — |
| | **TOTAL . . . . . . . .** | **44,635,000** | **24,235,000** | **9,400,000** | **10,500,000** | **500,000** | — |

## X. Education, Training and Culture.

### Introduction.

The re-organisation of the Somali Democratic Republic along Socialist principles has been accompanied by a reorientation of priorities in several spheres, and some of the most fundamental aims of the nation at present include (a) attainment of increased production through maximum mobilisation of resources of all kinds, and (b) greater support for national institutions. These objectives could be achieved only by greater participation of the people in administrative and production processes; but this wider involvement implies an appreciable ability on their part to effectively utilise the more modern and efficient techniques which have been evolved in the fields of public administration, manufacturing, agriculture, construction and all the complex services required by present day society. Th Government has taken certain fundamental steps to ensure this greater degree of participation, chief among which is the development of the country's human resources to the fullest extent of its capacity.

The desirability of this shift of emphasis is also supported by the fact that implementation of previous Programmes less than anticipated due partly to an inadequacy of trained personnel, and it is this Government's intention to pay particular attention to the needs for education and training facilities in order to ensure that the broad spectrum of development operations contained in this Programme will not be constrained by shortages of suitable manpower.

### Achievements: 1971-1973:

In the period following the Revolution, education received a new impetus reflected in a substantial quickening of activities. The objectives envisaged and strategies employed since 1970 can be summarised as follows :

(a) To expand access to education and improve and consolidate its quality through curriculum development, acceleration of text book production and strengthening the teaching of Science.

(b) Undertaking a systematic programme of school construction and provision of equipment to sustain the phenomenal rise in enrollment. The strategy for construction provided for a combination of the central government resources and leadership with the increasing voluntary public participation in self-help development projects.

The educational expansion achieved during the Programme is reflected in the following statistics on school enrollment:

| School level | 1970 | 1971 | 1972 | 1973 |
|---|---|---|---|---|
| Elementary | 25,939 | 31,364 | 40,300 | 50,480 |
| Intermediate | 14,761 | 16,027 | 17,000 | 18,200 |
| Secondary | 5,244 | 6,377 | 7,160 | 7.320 |
| **TOTAL** | **45,944** | **53,768** | **64,460** | **76,000** |

In this period the annual intake into Grade I of the elementary school increased from 6000 in 1970/1971 to 16,000 in 1972/1973, representing a net increase of 166% in the first two years of the Programme.

These trends are also substantiated by both the number of classrooms constructed in successive years and the annual investment made by the Ministry of Education.

### CLASSROOMS PLANNED AND CONSTRUCTED 1969-1973

| | 1969 | | 1970 | | 1971 | | 1972 | |
|---|---|---|---|---|---|---|---|---|
| | Prim. | Second. | Pri. | Second. | Pri. | Second. | Pri. | Second. |
| Cl.rooms planned | 123 | 15 | 107 | 72 | 150 | — | 150 | 20 |
| Cl.rooms built | 76 | 15 | 107 | 72 | 225 | 9 | 203 | 20 |

Between 1969 and 1972 the annual rate of construction of classrooms has more than doubled; and by the end of 1973 it is expected that approximately 628 classrooms are due for completion as compared with 450 indicated in the details of the Programme. During the period 1969-1973, the annual investment in educational activities administered by the Ministry of Education also almost doubled, and total inputs into this sector are probably somewhat much greater; since the amounts recorded for the Self-help Schemes are underestimates, and the costs which should be attached to the services provided by teachers participating under bilateral agreements were neglected.

In the field of technical education, the Programme included proposals for the upgrading of the existing techncial institutes, to which two more schools were added; the converted Maritime Technical Institute and the Agricultural Institute in Afgoi in 1973. Another important development in this field was the establishment of the UNDP/UNESCO/ILO four year «Technical Education and Vocational Training Project» in October 1972. The project includes a training component for instructors and teachers of technical subjects and, in this regard, could fill an important gap in the series of steps being taken to improve output from technical institutions.

Whereas prior to 1970 little attention was paid to the training of teachers, the decision taken in 1972 to accelerate the expansion of primary school enrollment results in two significant measures:

(a) Top priority was given to the need for teachers when deploying the National Service Volunteers, of whom 750 were inducted as teachers for the 1972/1973 school year. The National Service will continue to be an important source for the recruitment of primary school teachers for several years.

(b) A two-year diploma course for the training of primary school teachers was started at the College of Education in October 1972 with an intake of 250 intermediate school leavers. Also, the College continued its programme for the education and training of secondary school teachers; and in March 1973 the the first class of 42 was graduated.

In July 1973 an evaluative examination was taken by 130 primary school teachers in order to diagnose their level of competence. This exercised in terms of a categorisation of teachers, reflecting a broad indication of their strength and weakness. The results showed clearly that more than one half of the teaching force is sub-qualified and therefore needs upgradnig, and provided a basis for planning courses suited to their needs.

**The National University:**

This institution occupies an important place in the future development of the country. It has a unique opportunity to contribute to the education of Somalis in their own enviornment and to serve the high-level manpower needs of the country. A number of circumstances have contributed to its comparatively slow rate of growth, and up to recently, the range of specialisation available was comparatively few.

However, since 1971 greater attention has been given to broadening the range of faculties in this institution and the opening of departments which are important in the training of manpower considered to be essential for the attainment of development goals. Five faculties (including the College of Education) were in operation in 1972, namely, education, Law, Economics, Agriculture, and Mathematics/Science. Although the number of graduates leaving any institution annually may be inadequate measure of its achievements, it is of interest to note that the numbers graduating during 1970/1971 and 1971/1972 were only 12 and 23 respectively; and previous projections have shown that the total graduating from all faculties (including education) by 1976 will be approximately 450.

### The Somali Language and Script:

In 1972, the Government pronounced and implemented a number of basic policy measures on the writing and application of the Somali Language on the basis of the completed work of the Technical Language Commission. These decisions are being very effective in contributing to fundamental changes within the Somali Society, particulary in view of the fact that the Somali Language has been adopted as the official means of communication of the Government and Press. Further, the Government, realising the importance of having the national language written and used as the medium of instruction in schools for the betterment of the educational system and the effective implementation of measures for its development, set up a commission to write primary school texbooks in Somali. Within three months, textbooks for elementary grades were printed and distributed to all schools; and before the end of 1973 a massive literacy campaign is envisaged as well as the preparation and distribution of textbooks for intermediate schools.

### Nationalisation of Private Schools:

As part of its programme on the introduction of the Somali Language and curriculum unification of the school programme, and because of the Government's commitment to ensure greater educational expansion, the Government took over all private schools in October 1972. The total enrollment of all private schools represented about 23% of the school system, and the previous discussions and quantitative illustrations referred only to that part of the system which was publicly owned before this act of nationalisation. However, since the nationalisation of the private schools encompasses responsibilities for the recruitment of additional teachers for these schools, their extension and replacement of inadequate facilities, the necessary adjustments were made in calculating future financial rquirements for this sector.

### Summer Youth Camps:

The Ministry of Education, on the assumption that a correct political consciousness is a pre-requisite for the successful implementation of all its programmes, has in 1972, organised a number of activities aimed at political and revolutionary education or orientation. To this end, and subsequent to an experimental and successful operation in 1971, summer Youth Camps were organised in five centres for a total of 6,200 youths. Now that their value has been proven, the summer youth camp concept will be a permanent feature of the educational process in all regions.

### Women's Education:

18 centres are in operation (11 in the regions ), staffed by 41 teachees. The Central Womens Education Centre in the Capital is the prototype on which the other centres are modelled; it also gives the others guidance and help. present activities in the field of Women's Educatoin are aimed at the opening and staffing of more centres, the training of instructors, and the provision of training for teachers of Home Economics and in the Reformed Quranic Schools.

### Overall Objectives and Strategy of Education

In order to serve the aspirations of the nation, it is imperative to expand, strengthen and improve its education, both formal and informal. This endeavour will progressively enable the Government to meet the social demand for more and better education and at the same time to obtain the trained human resources that are required for rapid development and growth. Education and training are seen as some of the best forms of long-term investment for socio-economic development.

The programme has been designed in accordance with the Government's ideals and goals, and has been devised vis-a-vis the achievements and experience of educational development to date, especially the 1971-1973 Development Programme. It provides for overall balanced development, and it entails comparatively considerable financial, administrative and organisational implications. Also, in view of the fact that it has a long term perspective well beyond its own termination, it is essential to specify some objective and principles, and define the priorities which will guide the strategies and govern the implementation of the Programme in terms of measures, programmes and projects.

The overall objectives and strategy of the Programme for education, training and cultural development are as follows:

(a) Continued expansion of enrollment at all levels of education administered by the Ministry of Education with particular emphasis on primary education and increased opportunities for rural communities including the nomads.

(b) Further democratisation of the access to education, improvement in the content and quality of educational programmes and increasing the effectiveness of the educational process.

(c) Expansion of enrollment in the field of technical education and also in such specialised schools as are operated by the Ministry of Health and the Ministry of Livestock, Forestry and Range. These increases are intended to partially overcome critical shortages of certain types of technicians. Also, in this connection, new types of post intermediate schools, e.g., in agriculture, for the training of lower level technicians and a post secondary institution for the training of higher level technicians will receive attention.

(d) Greater attention will be paid to the development of the University as a primary source for supplying the country's high level manpower needs, and at the same time, bring about a reduction of the dependence which has been placed on the foreign, fellowships and scholarships programme. The fields of specialisation available at the National University are to be increased by the opening of new faculties in the fields of Medicine, Engineering and Veterinary Sciences.

(e) Since the National University will not be able to offer courses in serveral fields of specialisation which are in demand, it will be necessary to continue the foreign fellowships and scholarships programme in selected subjects and, as a short term measure, it will also be used for the training of some high level technicians until local facilities have been sufficiently expanded and improved.

(f) The Government has taken note of the results of a recent survey which indicates that large numbers of presently employed workers should improve their proficiency by taking part in upgrading courses.
With regard to SIPA, its structure is to be recorganised and the staffing situation strengthened so that it can deal more effectively with the training of workers in the public sector. In addition to the courses which are usaully organised for adiministrative, executive, clerical and secretarial personnel, a series of diploma and short term specialised courses in fields such as Production Planning, Project Analysis, Development Administration, Community Development, Social Administration, Local Government and Marketing and Distribution are to be introduced.
With regard to the second type of upgrading courses, the several Ministries and agencies which are conducting courses will be further helped in the development of skilled manpower required for the efficient execution of their functions. However, an examination will be made to determine the extent to which there can be greater co-ordination and co-operation in order to save finance, teaching and other resources.

(g) This co-ordination mentioned above should be facilitated by the Vocational Training Centre. It should serve as a central source for the training and upgrading of those skilled workers which are common to several organisations, for example, carpenters, masons, mechanics and electricians. Furthermore the Centre will absorb intermediate school leavers who have no chances in enrolling in secondary or other formal technical schools.

(h) To introduce a system of non-formal education, including women's education and youth activities.

(i) In the field of cultural development, continued emphasis will be given to the use of the Somali language in written form, and the promotion of efforts aimed at mass and functional literacy. The higher level of literacy resulting from these efforts will stimulate interest in and greater demand for public information centres such as libraries and museums; and it is the Government's intention to further develop such facilities in the interests of the people.

### I. Primary and Secondary Education

### Acces to and Expansion of Education:

A 10% annual rate of growth at the entry point of primary education (Grade I) has already been established for the duration of the Programme. The second level of primary education is seen as a continuation of an eight year education cycle. As such, it will be made available to all pupils entering the primary school system.

Access to secondary schools will remain at 60% of all intermediate school leavers, assuming that their level of attainment is satisfactory, while provision for technical and vocational education at the post intermediate level will be progressively expanded.

It is estimated that the 1978 enrollment in elementary schools (113,000) will increase by 82% over the corresponding 1973 base (63,330). Growth in the cases of intermediate and secondary schools during the same time period will be 152% and 36% respectively.

### Improvement in the Content of the Education Programme:

The Somali language, already established in elementary schools will be progressively introduced as the medium of instruction in the rest of the school grades.

The content of educational programmes shall be written with emphasis on the socio-political philosophy of the country and in accordance with its cultural heritage and traditions.

Accelerated curriculum development aimed at practical improvements and modernisation will be pursued, and the teaching of foreign languages will be strengthened and concentrated after the elementary grades.

**Increasing the Effectiveness of the Educational Process:**

Improvement in the content and effectiveness of the process of education depends largely upon the quality of the teachers, consequently, teacher education and training programmes both pre and in-service shall be improved and expanded during the Programme period. The assessment of teachers will be systematically carried out through a more comprehensive and refined method, as a sequel to the examination held in July 1972, and through a reorganised and reinforced inspectorate, both central and regional.

The present centralised examination of the pupils performance will be improved through the institution of a more viable and objective method of assessment.

## Project No. 1 — PRIMARY EDUCATION.

In pursuance of the above targets and implementation of the measures stipulated for primary education, it will be necessary to construct 1,350 classrooms (nicluding 250 offices and storerooms), representing the accomodation required to maintain a 10% annual rate of increase at the entry point of elementary school enrollment. The proposed construction schedule on a global basis is as follows:

| | **1974** | **1975** | **1976** | **1977** | **1978** |
|---|---|---|---|---|---|
| Additional Classrooms | 250 | 250 | 250 | 300 | 300 |

The additional and cumulative total number of teachers required to facilitate the programmed expansion of primary education will be:

| | **1974** | **1975** | **1976** | **1977** | **1978** | **Total** |
|---|---|---|---|---|---|---|
| Additional Teachers | 255 | 255 | 255 | 305 | 305 | 1375 |
| Cumulative Total Teachers | 255 | 510 | 765 | 1070 | 1375 | |

That is, nearly 1400 additional teachers will be required to support the expansion envisioned for primary education. This figure does not fully represent the demand for teachers at this level of education, since the majority of teachers for these are recruited through the National Service Scheme and have to be replaced after serving only for one year.

## Kindergarten Education:

The present Government has embarked on a policy aimed at improving both the content of education available in and the physical facilities allocated to Koranic Schools. There are in the country at present 13 Kindergarten schools. Koranic schools whose students range in age from 3-6 years are still in poor conditions with particular reference to the health of the children as well as the type of education they receive; and it is the intention of the Ministry of Education to reform these schools by converting them into Kindergarten schools in collaboration with the Local Government Authorities.

this project will assist the development of Kindergarten Education by supplying the minimum necessary equipment and relevant materials.

## Qualitative Improvement of Primary Schools.

This Programme provides for the construction and furnishing of several hundred new classrooms in conformity with the decision to maintain a 10% annual rate of growth in enrollment at the entry point of elementary education. This expansion of physical facilities will, however, not be sufficient to ensure maximum returns from investment at this level of education, and it is essential to have a companion programme which will attempt to improve the content and quality of primary education. These improvements will enable primary school leavers to take greater advantage of intermediate and secondary education; and at the same time contribute to a lowering of the drop-out and examination failure rates at these latter two higher levels of education.

This project is intended to provide for the distribution of science kits and the establishment of libraries in 400 primary schools during the Programme period.

The total investment for primary education is So. Shs. 23.355 million. This investment involves a recurrent expenditure of So. Shs. 21.485 million during 1974-1978.

## Project No. 2 — SECONDARY EDUCATION:

For secondary education, a transfer rate of 60% from the next lower level of education implies the addition of 24 new streams (with 4 classes per stream) during the Programme period. These will be placed in and distributed as follows:

| | | | |
|---|---|---|---|
| 1974 | — | 10 streams | (5 boarding and 5 day) |
| 1975 | — | 10 streams | (6 boarding and 4 day) |
| 1976 | — | 4 streams | (day) |

Upper Shabelle, 2; Lower Shabelle, 4; Hiran, 2; Nugal, 2; N. West (Gabileh and Berbera, 4; 26th June, 4); Galgadud, 2; Gedo, 2.

The additional and cumulative total number of teachers (all of whom should be graduates) required to support the above expansion will be:

| | 1974 | 1975 | 1976 | 1977 | 1978 | Total |
|---|---|---|---|---|---|---|
| Additional Teachers | 20 | 40 | 48 | 48 | 28 | 134 |
| Cumulative Total Teachers | 20 | 60 | 108 | 156 | 184 | |

This apparently substantial increase in the volume of enrollment at the secondary level is justified on several grounds. One of the most important reason is the growing demand within recent years for a larger number of secondary school graduates in order to improve the quality of the entrants to several occupations, and to provide the basic human resource material required for modernising the economy. A second reason is the the expansion of higher education and the opening of courses for the training of higher level technicians which will depend very heavily on the availability of suitable secondary school graduates in sufficient numbers and shortages from this source could cause difficulties at the higher levels.

The cost of the project for expansion of secondary education is So. Shs. 8.512 million. Its recurrent expenditure is So. Shs. 15.965 million during the Programme period.

## Project No. 3 — PRE-VOCATIONAL PROJECT:

This project is designed to implement a programme for the strenghthening of science teaching and the introductoin of practical education in secondary schools. The proposed programme seeks to teach skills and encourage attitudes essential for the absorption of school leavers into their various community lives and, thereby, enable them to contribute more effectively to the process of development. The strengthening of science teaching is seen as a useful investment as through such a programme, many more will be encouraged to follow career demanding a sound preparation in the sciences, thereby helping to overcome the critical shortages existing in certain professions. Further, the possibilities for the sustaining of certain faculties, e.g., engineering, at the University would be enhanced, the failure rate for degree courses involving science reduced, and the average time taken to earn such a degree shortened.

This project envisages the construction and furnishing of 25 science laboratories, 14 workshops and 6 libraries during the period 1974-1976; and the total nivestment of the project is So. Shs. 6.027 million. It has recurrent implications of So. Shs. 2.450 million during the Programme period.

### Project No. 4 —TECHNICAL EDUCATION:

### Mogadishu Polytechnic Institute:

Although many Somalis have had the benefit of higher education mainly through scholarships and fellowships granted under international and bilateral technical assistance and, therefore, a pool (although inadequate) of professionally qualified (at university degree level) workers exists, the situation at the technician and skilled worker levels has been critical for sometime. It is not usual for the majority of the labour force of any developing country at the two latter levels to be trained abroad, and the necessary facilities within the country have been totally inadequate. Projections of manpower requirements at the technician and skilled worker levels for the next few years have shown that demand will be much greater than what the few existing programmes can supply at their present and likely future rate of output and, consequently, development efforts will be hampered if suitable provisions are not made for the training of these categories of personnel.

This project consists of a Polytechnic Institute for 200 students and a Technical Institute for 600. In both levels, courses will include: Building, Electrical and Mechanical Engineering and an Agricultural Engineering section. This technical education complex will have boarding facilities for 400 students.

The total cost of the project is So. Shs. 25.84 million out of which So. Shs. 8.54 million is recurrent expenditure.

**Burao Technical Institute:**

Currently, this Institute provides training in automechanics, electrical and machine shop practice, each course being of three years duration. The reasons for its expansion are the same as outlined above, and the intention is to add a new crafts section to enable the establishment of a three years course in agricultural mechanics for 160 students.

The total investment required is So. Shs. 750,000.

### Project No. 5 — EDUCATIONAL RESOURCES MATERIALS & DEVELOPMENT CENTRE:

The decision to introduce the Somali language as the medium of instruction in schools implies that during the Programme, all textbooks for primary education and supplementary texts for secondary education shall be produced locally. This project anticipates the basic requirements arising from the implementation of the educational programmes in Somali. It consists of the followinb:

i) Textbook writing for grades 7 and 8 of the intermediate schools, (12 books);

ii) Textbook writing for secondary schools, (24 books);

iii) Textbook writing for Adult Functional Literacy Courses.

The total number of volumes to be printed for items i) and ii) is 1,900,000; and for item iii) 1,700,000; giving a total of 3,600,000 volumes. In addition to the printing costs, the estimates given below also take into account expenditures which will be involved in the writing of these books and the necessary storage facilities and the establishment of a material development and production centre. The somalisation of the school curriculum and the literacy programmes planned cannot proceed without the successful implementation of this project, and total cost of the project is So. Shs. 1,750,000. It has however, a recurrent cost of So. Shs. 25.36 million during the Programme period.

The programme of studies will be highly practical, combining training and production functions, and in addition to the basic courses in animal and crop husbandry sciences, will provide for instruction in several matters affecting the rural economy as well as elementary arithmetic and subjects of general education.

The capital investment of the project is So. Shs. 18.0 million and the recurrent expenditure during the Programme period is So. Shs. 6.950 million.

## Project No. 9 — TEACHER TRAINING COLLEGE.

Consonant with the objectives of the Programme of expanding the access to education, improving its content and increasing its effectiveness, it is absolutely imperative to provide for well qualified and trained teachers — and in sufficient numbers in the face of the 10% annual rate of growth at the entry point to elementary education. Projections of additional teacher requirements in intermediate and elementary schools ar as follows:

### SUPPLY & DEMAND FOR PRIMARY TEACHERS

| | Demand Requirements | | | Supply of School Teachers | |
|---|---|---|---|---|---|
| Year | Elementary | Intermediate | Total | Output | Deficit |
| 1974 | 318 | 88 | 406 | 250 | 156 |
| 1975 | 270 | 166 | 436 | 280 | 156 |
| 1976 | 206 | 273 | 479 | 280 | 199 |
| 1977 | 227 | 314 | 541 | 280 | 261 |
| 1978 | 250 | 320 | 570 | 280 | 290 |

In view of the above, it is obvious that the problem, of teacher supply is particulary acute with regard to primary education since demand substantially exceeds the present output of the primary education programme of the existing College of Education, For instance, in the academic year 1978/79, demand will total 570 while supply from the present single source will reach only 280.

The objective of this project is to create an integrated Primary Teacher Trainnig Institution which will have a much higher output than at present. The proposed new training institution for elementary/intermediate school teachers to be established in 1975 will provide for a two-year programme of studies leading to a diploma in education. The present diploma programme at the College of Education will continue with the education and training of primary teachers, although it may be expected to concentrate on certain sections of the training programme after further examination.

No special provisions have been made for the training of secondary and technical teachers since existing facilities and programmes are adequate. In the case of secondary School teachers the present output is satisfactory because the expansion of secondary educatin will be modest until the heavy enrollment of the cohorts in the early 1970's finish the primary stage after 1978. Therefore the annual intake of about 75 students to the College of Education will remain constant until 1976 when it will be raised to 140 in order to meet the increased demand in 1979. It will be however become necessary to restructure the facilities at the College of Education to produce enough secondary school teachers not only to man the enlarged secondary education, but also to somalise all the existing posts.

Compared to secondary general education, the shortage of teachers and instructors in technical and vocational education is critical and urgent. In order to replace staff working in existing technical institutes under bi-lateral programmes and provide for the proposed polytechnic it has been estimated that 92 teachers with university engineering degrees with a diploma in teacher training and 71 workshop instructors will be required. The only potential source for the former will be the graduates returning from studies abroad, and provision for the training of the latter will depend heavily on the existing UNESCO/ILO project and the planned polytechnic in Mogadishu.

The total investment of the Teacher Training College is So. Shs. 7.923 million. So. Shs. 3.6 million will be its recurrent implications during the Programme period.

## Project No. 10 — IN-SERVICE TEACHER TRAINING.

In-service teacher training will be a continuous and systematic endevour aimed at up-grading of practising teachers. A recent evaluation of the teaching force has shown that a large proportion needs a long period of further education and training. To this end, between 1973 and 1976 a total of 800 primary teachers will be released to attend a specially designed course of one year's duration. In this way all subqualified teachers will be fully re-trained by the end of the Programme period. This course will lead to a Diploma in Education.

In addition, Short Refresher Courses shall be mounted for primary and secondary school teachers, headmasters and teachers of specialised subjects. These courses will be held during the long school vacations. It is estimated that 375 teachers and 200 headmasters and other education officers will participate in these shorter courses.

The capital investment of the project is So. Shs. 512,500.

## Project No. 11 — MARINE AND FISHING INSTITUTE:

The fishing potentialities of Somalia is one of the branches of economic activity which has been very much under exploited, and available estimates suggest that the amount of fish taken by Somalia from the waters around its shores could be considerably increased. Several factors have contributed to this low level of exploitation, some of which will be tackled in a companion project of the Ministry of Fisheries and Marine Transport.

In order to remove one of the major difficulties in the way of exploiting the sea resources, the fishermen must first be trained. Further the success of the fishing co-operatives planned will depend to a large extent on the implementation of proper training programmes for the fishermen. It is, therefore, necessary to have an institute and training centres whose graduates will carry out the training schemes for the fishermen.

Accordingly, it is proposed to establish a Maritime and Fishery Institute in Mogadishu to repalace the existing Maritime School, since the latter has no physical, technical as well as educational facilities needed for this project. It is anticipated that the first group of students will be enrolled in the Institute during the academic year 1976/77 and will number 60. The courses will be of four years duration and an additional 60 students will be added each year so that it will reach its maximum capacity of 240 students by the year 1979/80. This will be a post intermediate institution and there will be two areas of specialisation;

i) Fishing techniques, marine biology, etc. and

ii) Marine mechanics

Graduates from the second area of specialisation will be instrumental in improving fishing equipment and carrying out experiments at boat designs suitable for the local industry.

The need to construct new building and provide the necessary equipment to make the annual expenditures on this project comparatively large.

The total capital investment of the project is So. Shs. 12.0 million. Its recurrent expenditure is So. Shs. 668,680.

## Project No. 12 — VOCATIONAL TRAINING CENTRE.

The principle of certain ministries and agencies being responsible for training in their respective fields of competence has been well established, and schools or institutes attached to these organisations have been in existence for some time. However, there are several occupations which are common to many ministries and for which there are no central sources for the supplying of skilled workers, including carpenters, masons, electricians, various types of metal workers, etc. At the same time the individual ministries and agencies are unable to provide suitable training for these types of workers on their own initiatives, and consequently the present demand for this category of personnel has remained unsatisfied for a long time.

Also contributing to the shortage of suitably qualified skilled workeres is the fact that the private sector has been doing very little in arranging training programmes for their workers.

Another and important justification for this project is the fact that the majority of Somali Labour force at the skilled worker level acquired their skills through working on the job and have no opportunity to participate in organised or institutionalised training programmes.This historical circumstances limits their ability to absorb further training and, hence, their prospects for promotion and advancement in their skills are adversely affected. The upgrading of presently employed workers is viewed as one of the important components of this project.

The difficulties which will arise in the training of skilled workers due to a shortage of teachers of technical education and vocational instructors has been noted and it is considered that this project will assume a major responsibility for the training of these teachers and instructors.

The annual amounts earmarked for this project take account of the desireability of separating the present operations from the joint UN/UNESCO/ILO project which commenced functioning recently. Therefore provision has been made for the purchase of land, erection of suitable buildings and installation of equipment.

The total investment of the project is So. Shs. 4.84 million. So. Shs. 1.364 million will also be its recurrent expenditure for the programme period.

**Project No. 13 — MULTI-PURPOSE EDUCATION:**

The two main difficulties impeding rapid progress in the field of education are limited financial resources and shortage of qualified teachers at all levels. The total enrollment of pupils in the general secondary schools does not meet the requirements of the nation and about 40 per cent of the teachers in the secondary schools are expatriates from different sources and a large proportion of the others is insufficiently qualified. Moreover, in these schools there is only a limited programme of science and practical work. The quality of the education provided in most of the secondary schools is therefore partly affected by its own inherent short-coming and partly by the quality of the students admitted, mainly because the primary schools have a high proportion of unqualified teachers. The National Teacher's Training Centre at Afgoi which was originally established for the training of primary school teachers was up-graded in 1967 to be the main source of supply of secondary school teachers, offering a 4-year degree course to secondary school leavers. For the time being, a one year post secondary course is being offered to secondary school leavers to prepare them for work in intermediate schools. In order to meet the general requirements for teachers, a multi-purpose project for the development of pre-service teacher training facilities, improvement in the development of pre-service teacher training facilities, improvement in the quality of the secondary schools and restructuring the technical training institutes has been undertakn. The project is to provide a pre-service teacher training centre at the college of education with, provision of facilities for practical work for boys and domestic science for girls and science laboratories and workshops in 12 secondary schools and restructurnig the Mogadiscio and Hargeisa Technical Schools.

The project which commenced during 1971-1973 development Programme will spill over into the 1974-1978 Programme. A total investment of So. Shs. 24.744 million will be made for the completion in 1974. The project will be supported by two UNDP large scale projects in technical education and in teacher training.

## Project No. 14 — THE SOMALI NATIONAL UNIVERSITY:

During the period 1974-1978, the National University is expected to play a much more significant role in the further development of the country. This understanding is reinforced by the substantial amount of development funds allocated to this institution — a sum totalling nearly 148 million So. Shs. Several factors have contributed to this desire for an improvement in the rate of growth and broadening of the range the University's interest, and by the end of the Programme, the period of experimentation with its basic form and structure should be over.

2. The future contributions of this institutoin should be particularly effective in several important areas, including:

(a) Facilitating the expansion of education by the provision of graduates required for service as teachers in secondary schools, and

(b) Providing some of the professional workers and high level technicians necessary in several fields of activity.

The objectives for the National University and the strategies to be employed in their attainment may be discussed under the following headings:

(i) Opening of new faculties and increases in the annual intake of existing faculties;

(ii) Acceleration of the process of Somalisation of the teaching staff of the University;

(iii) A corresponding expansion of physical facilities including teaching space, laboratories, students quarters and social amenities;

### Opening of Some New Faculties and Increases in the Annual Intake of Existing Faculties.

3. During the academic year 1972/73, only the following five faculties were in existence; Economics, Law, Education, Science and Agriculture.

The expansion plans envisage the starting of new faculties by the addition of Medical and Veterinary disciplines, and restructuring of the Science Faculty to provide for Faculties of Engineering, Chemistry and Geology. Annual intake to the faculties of Jurisprudence and Economics will be increased to 100 and for other faculties the target will be 60.

(a) **Faculty of Agriculture.** — The increased attention being given to agriculture within recent years partly due to the substantial opportunities which exist for increasing food production to meet local demand, has been accomplished by a desire for greater utilisation of professional and technical workers in the field of agriculture. Consequently, starting from 1974, the number of students entering the faculty of agriculture will be raised from 30 to 60; and this change will result in increased numbers graduating in later years.

(b) **Faculty of Medicine.** – Although facilities for the training of paramedical workers have existed within the country for some time, there have been no corresponding sources for the supply of professional workers at the level of the medical doctor or specialist. Therefore, total dependence has had to be placed on foreign institutions for the training of doctors, and the numbers becoming available have been far less than the circumstances necessitate. A national supply of doctors will bring about a faster rate of improvement of the health services than hitherto. 42 students will begin graduating from this faculty in 1977 and the output for 1978 is expected to be the same figure.

(c) **Veterinary Science** — The importance of the livestock industry in the overall economy of the nation has been underlined in development programmes. Improvements in the quality of the output of this sector can only be achieved as result of raising the standards of professional and technical services. The faculty of Veterinary Science will make a contribution in this regard by supplying veterinarians who were formerly trained only in foreign countries. 21 in 1977 and 42 in 1978 are expected to increase graduates from this faculty.

(d) **Faculties of Science — Engineering, Chemistry and Geology.** — A higher level of mineral exploration and processing than hitherto, the efficient servicing of existing and planned industrial undertakings and the processing of food and other products will all contribute to increase demand for graduates in the science. The three component faculties of Engnieering, Chemistry and Geology will have a combined intake annually of 180 students, (60) each and the first two years common to all students.

(e) **Faculty of Jurisprudence.** — The proper administration of justice, implementation of the provisions of the labour code, drawing up of various contracts arising from the industrialisation process, and the drafting of laws connected with modernisation of the state will contribute to increased demand for qualified legal workers, and this warrants the expansion of this faculty to meet the demand.

(f) **Faculty of Economics.** Growth of the faculty of econmics will be similar to that experienced in the faculty of jurisprudence, and some of the economic expansion and modernisation forces causing greater demand for graduates from the latter faculty are equally applicable to the faculty of economics. Furthér, economists with a thorough understanding of the stimulants and constrains affecting further development of the Somali economy would be an added advantage.

(g) **College of Education.** — The need for an increased flow from secondary schools whould be supported by suitable numbers of teachers trained at University Degree level. Both the numbers entering and graduating from the College annually will increase progressively during the planning period at rates indicated by the following figures.

| | **1974** | **1975** | **1976** | **1977** | **1978** |
|---|---|---|---|---|---|
| Entering | 120 | 150 | 180 | 210 | 240 |
| Total Enrolled | 340 | 408 | 481 | 576 | 678 |
| Graduates | 50 | 70 | 70 | 84 | 105 |

(h) **Summary of Projected Achievements for All Faculties.** — The overall achievements of expansion may be partially examined through output of graduates resulting from the implementation of the above expansion programmes.

## PROJECTED NUMBER OF GRADUATES

## SOMALI NATIONAL UNIVERSITY

| Faculty | | 1973 | 1975 | 1976 | 1977 | 1978 | Total |
|---|---|---|---|---|---|---|---|
| Agriculture | | — | 22 | — | 21 | 42 | 85 |
| Medicine | | — | — | — | 42 | 42 | 84 |
| Veterinary Science | | — | — | — | 21 | 42 | 63 |
| Science | Engineering | — | — | — | 21 | 42 | 63 |
| | Chemistry | — | 15 | — | 21 | 42 | 78 |
| | Geology | — | — | — | 21 | 42 | 63 |
| Jurisprudence | | 50 | 80 | 100 | 70 | 70 | 370 |
| Economics | | 65 | 90 | 115 | 85 | 70 | 425 |
| Education | | 50 | 70 | 70 | 84 | 105 | 379 |
| **Total** | | **165** | **277** | **285** | **386** | **497** | **1,610** |

The 1,610 graduates projected for the period 1974-1978 represents a remarkable increase in relation to the experience of the years since the inception of the university. Levels of enrollment will also rise correspondingly, going from 2197 in 1974 to 3622 in 1978.

## TOTAL ENROLLMENT IN ALL FACULTIES OF THE UNIVERSITY

| 1974 | 1975 | 1976 | 1977 | 1978 |
|---|---|---|---|---|
| 2197 | 2707 | 3121 | 3450 | 3622 |

### Acceleration of the Process of Somalisation of the Teaching Staff of the University.

The desire to Somalise the teaching staff of the University is an integral part of the efforts being made in all sectors to ensure greater control by Somalis over the direction and rate of change of all aspects of the country's affairs. In prevoius years only a very limited number of Somalis participated in teaching duties at the University, and the first meaningful change occured when a decision of the Government stipulated that about 40 senior Government Officials should teach in the institution on a part time basis. Such decisions only contribute to a partial solution of the problem, and need to be supported by more comprehensive and long term action designed to prepare adequate numbers of Somali Higher Education teachers. The basis of the Somalisation programme is the unavoidable necessity to create, in the medium range, a Somali teaching team which can be fully inserted into the local situation and, therefore, in a better position to lead and sensitize the students.

The objectives of this policy are conveyed by noting that by 1978. 100% of all positions below the level of "professor" will be occupied by Somalis. A similar state of affairs with respect to professors will be achieved in all faculties with the exception of Medicine, Engineering, Chemistry and Geology where the corresponding figure will reach 80%. The total requirements for professors and assistants will rise from 98 in 1974 to 260 in 1978 and distributed by faculties in the following manner.

## TOTAL REQUIREMENTS FOR PROFESSORS AND ASSISTANTS BY FACULTY

| Faculty | | 1974 | 1978 |
|---|---|---|---|
| Agriculture | | 7 | 19 |
| Medicine | | 13 | 30 |
| Veterinary Science | | 6 | 18 |
| Science | Geology | — | 39 |
| | Engineering | 13 | 40 |
| | Chemistry | — | 37 |
| Jurisprudence | | 14 | 14 |
| Economics | | 13 | 14 |
| Education | | 32 | 49 |
| ALL FACULTIES | | 98 | 260 |

**Content of Training** The University will have to play a leading role in building the future of the nation. Hence the training it embarks upon and the attitudes it shapes should spring from the marriage between the values, culture, environmental conditions and socio-economic realities of the country on the one hand and its political philosophy on the other. The content of education will therefore be determined not by external and dependent relationship with foreign academic life but rather by the realities in the country in terms of needs, resources and future aspirations. Close relationship between the University and other organs of the Government will be forged to dovetail the supply of high level and socially motivated manpower to the requirements of the country. The manpower planning mechanism in the Ministry of Planning and Co-ordination will be pivotal in harmonizing output and requirements.

Emphasis on scientific analysis of the condtiions of the country and social motivation of the students will mark the fundamental changes to be sought in University training. The changes in content of education will not be confined to the University but it will be more so at the primary and secondary levels. The University will take up from where secondary schools leave off in human development and to that extent there will be harmony between the two levels in terms of content and the medium of instruction.

## Expansion of Physical Facilities, Teaching Space, Laboratories, Students Quarters and Other Social Amenities.

6. The present physically decentralised structure of the University creates additional problems for the administration of the Institution and inevitably leads to a certain amount of duplication. Consequently, expenses for building construction as well as management will be greater than if all operations were conducted on a single campus which was designed to facilitate grouping of all related courses. The University's building programme has been phased to coincide with the planned expansion of enrollment and takes into account the need for available amenities such as restaurants, housing for some students and sports facilities.

**Faculty of Agriculture.** — Expenditure on this faculty during the planning period is expected to amount to So. Shs. 13.7 million. Of this total amount, 2.70 millions will be spent on the salaries of the teaching staff; 8.10 millions on buildings and equipment and 2,92 millions on students services. The building programme for this faculty is intended to provide 1200, 1460 and 1090 square metres of teaching and laboratory space in 1974, 1975 and 1976 respectively.

**Faculty of Medicine.** — The need to provide a teaching hospital and suitable laboratories and equipment for this residential course will cause expenditure on this faculty to be comparatively high and this has been taken into account in the health sector. For the five years a sum of nearly 16 million So. Shs. will be required. Teachers salaries will account for So. Shs. 6.23 million; Equipment and Teaching Materials So. Shs. 2,37 millions and Students Services 3.12 millions.

**Faculty of Veterinary Science.** — The extent of construction for this faculty will be minimal and will be restricted mainly to laboratories. Expenditure on this faculty during the Programme should total to So. Shs. 6.81 millions,teachers' salaries will consume So. Shs. 2.95 millions, of this total; laboratories and equipment 1.17 millions and students services 2.69 millions.

**Faculties of Engineernig, Geology and Chemistry.** — These three faculties will share certain facilities during the first two years of each course since they will follow the same curriculum during this period. The costs will therefore be somewhat less than if there were no links between them. However, the need to construct several laboratories including those of Mineralogy and Petrology; Structural Hydraulics, Environmental and Industrial Engineering will make expenditure on buildings and equipment quite appreciable. Of the So. Shs. 11.27 millions estimated as the amount required for the faculty of Geology, teachers salaries will account for 5.27 millions; buildings and equipment 3.14 millions; and students services 2.86 millions. Expenditure on these three faculties is shown below:

(million So. Shs.)

| | 1974 | 1975 | 1976 | 1977 | 1978 | Total |
|---|---|---|---|---|---|---|
| Chemistry | 1.88 | 2.14 | 1.91 | 2.24 | 2.05 | 10.22 |
| Engineering | 1.84 | 2.89 | 2.73 | 2.62 | 2.35 | 12.43 |
| Geology | 1.84 | 2.50 | 2.65 | 2.24 | 2,04 | 11.27 |

**Faculty of Jurisprudence and Economics.** — Since these faculties were in existence before the Programme period, fixed capital expenditure will be low in comparison with other faculties. Construction, equipment and furniture for these faculties will be in the form of an extension to the University's premises in Mogadiscio.

**College of Education.** — A ligh level of expenditure on this College is justified on the grounds that it provides essential support for expansion of the secondary education system. Construction will be minimal and, a substantial part of the funds to be allocated will be spent on upkeep of students; salaries of teachers, administrative and auxillary staff and maintenance.

Expenditure on faculty will be So. Shs. 29.46 millions. In summary the programme foresees a total capital investment of So. Shs. 54.2 million. This investment would entail a recurrent expenditure of So. Shs. 93.44 millions.

**The Academy for Somali Studies.** — The establishment of this project will allow concentration on those activities pertaining to the development of the Somali Language, institutionalised research into and encouragement of the various aspects of national culture such as oral traditions and history. The academy is also expected to contribute substantially to the consolidation of a common identity and homogeneity of the Somali people. The academy will play an important role in the development and standardisation of the Somali Script. Expenditure on equipment, research materials, consultancy services and staff development will be expected to amount So. Shs. 4.157 million.

**The National Museum** — Despite the fact that the need to relocate the Museum and bring the necessary improvements to both its structure and activities was seen for some time, all plans submitted to this effect were never given priority to ensure their implementation. It is unfortunate that this important institution is only now being viewed as a significant cultural facility. This project provides for an extension of the museum's activities to include research in archaeology and history, acquisition and collection of cultural materials, documentation, organisation of exhibitions, etc.

**The National Library.** — There is no doubt that the establishment of a National Library is an important factor for the achievement of progress in both cultural and scientific fields. Such an institution when well organized, will tend to stimulate the advancement of knowledge. Further, the experience gained would also be useful in encouraging the building of regional libraries and the improvement of school and University libraries. The cost of the project which provides for a suitable building, equipment, publications and staff development and consultant services is So. Shs. 5.52 million.

## EDUCATION: CAPITAL INVESTMENT

| | PROJECT (1) | YEAR | | | | | |
|---|---|---|---|---|---|---|---|
| | | 1974 (2) | 1975 (3) | 1976 (4) | 1977 (5) | 1978 (6) | Total (7) |
| 1. | Primary Education | 4.375.000 | 4.375.000 | 4.385.000 | 5.210.000 | 5.010.000 | 23.355.000 |
| 2. | Secondary Education | 925.300 | 1.850.500 | 2.220.500 | 2.220.500 | 1.295.200 | 8.512.000 |
| 3. | Pre-Vocational | 437.000 | 1.808.050 | 3.782.370 | — | — | 6.027.420 |
| 4.(a) | Mogadiscoi Poly Tec. | 8.650.000 | 8.650.000 | — | — | — | 17.300.000 |
| 4.(b) | Burao Technical Institute | — | 375.000 | 375.000 | — | — | 750.000 |
| 5. | Education Resources | 262.500 | 262.500 | 350.000 | 437.500 | 437.500 | 1.750.000 |
| 6. | Educatin Inspection | 650.000 | — | — | — | — | 1.600.000 |
| 7. | Adult Education | — | 800.000 | 800.000 | — | — | 1.600.000 |
| 8. | Nomadic Education | — | 2.000.000 | 4.000.000 | 6.000.001 | 6.000.000 | 18.000.000 |
| 9. | Teacher Training College | — | 3.991.500 | 3.931.500 | — | — | 7.923.000 |
| 10. | In-service Teacher Training | 90.300 | 59.000 | 82.600 | 124.600 | 156.000 | 512.500 |
| 11. | Marine & Fisheries Institute | — | 5.000.000 | 4.000.000 | 3.000.000 | — | 12.000.000 |
| 12. | Vocational School | — | 2.799.600 | 1.789.800 | 180.600 | 71.900 | 4.841.900 |
| 13. | Multi-Purpose | 24.743.960 | — | — | — | — | 24.743.960 |
| 14. | National University | 14.920.000 | 18.930.000 | 10.340.000 | 3.260.000 | 2.750.000 | 50.200.000 |
| 15. | Academy | — | — | 921.720 | 1.736.000 | 1.500.210 | 4.157.930 |
| 16. | National Museum | — | — | 1.240.000 | 1.369.000 | 911,500 | 3.520.500 |
| 17. | National Library | — | 1.195.000 | 2.380.000 | 925.000 | 720.500 | 5.220.500 |
| | **TOTAL** | 55.054.060 | 52.096.150 | 40.598.490 | 24.463.200 | 18.852.810 | 191.064.710 |

## XI. HEALTH.

### Setting and Strategy for Development.

In Somalia while the lack of basic socio-economic data at present makes objective assessment of the health needs of the population difficult, it is possible to gauge with some precision the felt needs of the community for health services. The country has a number of health problems of considerable magnitude. Inspite of the fact that these are important and deserve to be tackled as quickly as possible, limitation of resources set a ceiling on the scale of action to solve them. Most of these problems are closely integrated and therefore attempts have to be integrated into a meaningful strategy and programme of action.

The morbidity due to preventable causes and diesase at infancy and childhood accounts for almost two-third of the total morbidity level in Somalia. Such diseases result, in the long run, in low output of workers, reducing their living standards as well as low expectation of life. The objectives of health planning should therefore be aimed at rapidly developing health services to a level where an effort can be made to solve these health problems as expeditiously as possible in order to protect the population from pre-mature and preventive ill-health.

In the past in Somalia, as in many other developing countries, the major approach to solve health problems was through efforts to develop general health services by the establishment of a chain of permanent institutions and mass campaigns with the specific objectives of solving particular health problems. The Development Programme 1971-1973 visualised the need for an integrated approach to health services and had specified strategy for implementing such an objective.

The 1971-1973 Programme consisted of 13 projects to which an additional project for the construction of a medical college was added. The financial outlay planned for the 13 projects was So Shs. 71.151 million. Of this So. Shs. 18.658 million were to be spent on projects sponsored and implemented by the World Health Organisation (WHO). So. Shs. 51 million were earmarked for building up three basic institutions, namely a pharmaceutical institute, a maternity and paediatric hospital and a tuberculosis hospital.

In terms of achievement, the implementation of the 1971-1973 Programme has shown a high level for all except for the last three projects.

While the project for the pharmaceutical institute had originally estimated an expenditure of So. Shs. 21 million, the nature of the project was transformed during the implementation period by substituting the project of the ASPIMA for a temporary period while the original project was to be implemented during the 1974-1978 Programme period. The project for maternity and paediatric hospital and the tubercolusis hospital have not been implemented due to the delay in obtaining the external assistance which was anticipated for these projects.

The total expenditure on projects in the sector has been So. Shs. 31.458 million, representing an achievement of 44.2%. If an additional So Shs. 3 million which was spent during the three year programme for building a medical college is added to the total, then the level of achievement rises to 47.1%.

5 out of a total of 8 WHO projects showed a level of achievement more than 100%. While two others recorded levels between 95-100%, the remaining project has reported an achievemente of 85%. In the case of the project for health and strengthening of medical hospitals which were the direct responsibility of the Government of Somalia, the level of achievement has been more than 100%.

ASPIMA whcih has been organised as an autonomous agency with responsibilities for import and distribution of medicine and drugs has been effective in impiementing the overall policy of making available to the public these items at reasonable cost. The organisatoin has effectively controlled the distribution network and established licensing and price control on the drugs and medicines. It has also introduced a programme for manufacturing pharmaceutical products in the country.

During the period of the Development Programme 1974-1978 the basic objectives which have already been laid down will be pursued with greater vigour. The creation of a basic health administrative structure from which services can flow is essential for the effective promotion of health activities in the country. In the Programme therefore first priority is being given to the establishment of such a structure throughout the country, more particulary in the rural and nomadic areas where existing services are minimal. Taking into consideration the diseases pattern in the country, the MCH and communicable disease services through public health wings will be extended through the establishment of these units at district headquarters and thereby laying the foundation for an integrated medical services organisation at the district level. In this context, the Programme also proposes to organise a mobile endemic disease control service for administering antigens and for collecting epidemiological data of diseases of special significance to Somalia. It is even hoped that by 1975 threat of importation of small-pox will be negligable when as hoped for by the World Health Organisation the neighbouring countries attain a small-pox free status. The existing small-pox eradication project will then be able to take over the additional functions of a surveillance system when an organisation for administering small-pox, BCG and other selected antigens in a mobile re-cycling vaccination programme, after the staff have been properly trained and greater administrative decentralisation has been established .

Th malaria pre-eradication programme will continue with greater emphasis on case-identification, anti-larval activities and the development of a national services to undertake malaria control work in preparation for an eradication programme. A closer coordination of these activities with general health services will also have to be promoted.

Tubercolusis which is one of the serious diseases prevelant in the country will be subjected to an expanded control programme. Parallely, facilities for treating the disease will be enlarged by providing more bed facilities in the hospitals It is also visualised that new T.B. control centres will be established at regional headquarters on the pattern of the centre which is already in operation in Mogadishu. Such an extensive programme for tubercolusis control will also be back-stopped by a country-wide mass BCG vaccination programme which will be implemented through static health establishments as well as the mobile endemic disease control services.

The demand for curative services in the country has been so great in the past that within the bounds of resources, limits had to be set to the development of preventive health programmes. The Development Programme 1974-78 therefore seeks to give more emphasis to preventive programmes even in those projects which while increasing the hospital bed capacity more greatly, will restructure the new hospitals' activities to flow into community health centres. The traditional service of the hospitals administration will therefore participate in health promotional activities. A cadre of well-trained staff with proper experience in preventive services is therefore being developed.

Based on findings of enquiries into the nutritional status of the people in the country, it is proposed to start a country wide programme of health education. A National Nutrition Board has already been established and a Nutrition Unit has started functioning. In addition to evolving a nutritional policy for the country as a whole in collaboration with the Ministries of Agriculture, Education and Information and National Guidance, the Board will start programmes of applied nutrition in selected areas to demonstrate correct nutritional approach and necessary changes in food habits.

Health programme objectives in the Development Programme will increase the health facilities in the country in a manner which is hown in the table below:

**Number of Medical Institutions and Facilities in 1973 and 1978**

| | | Hospitals | | Ambulatories | | P.H. Wings | | Hospital Beds | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1973 | 1978 | 1973 | 1978 | 1973 | 1978 | 1973 | 1978 |
| 1. | Benadir | 5 | 9 | 30 | 30 | 6 | 6 | 2,600 | 3,100 |
| 2. | Lower Shabelli | 5 | 5 | 32 | 32 | 3 | 5 | 142 | 202 |
| 3. | Central Shabelli | 4 | 4 | 25 | 25 | 2 | 4 | 92 | 138 |
| 4. | Lower Juba | 6 | 7 | 17 | 17 | 2 | 3 | 310 | 520 |
| 5. | Hiran | 5 | 6 | 12 | 12 | 1 | 2 | 190 | 300 |
| 6. | Mudug | 4 | 4 | 10 | 10 | 1 | 4 | 81 | 181 |
| 7. | Galgadud | 3 | 4 | 4 | 4 | — | 2 | 32 | 100 |
| 8. | Bari | 6 | 6 | 11 | 11 | 2 | 6 | 94 | 94 |
| 9. | Nuugaal | 3 | 4 | 5 | 5 | — | 2 | 94 | 104 |
| 10. | Togdheer | 4 | 5 | 7 | 7 | 1 | 4 | 213 | 313 |
| 11. | Hargeisa | 9 | 10 | 19 | 19 | 3 | 5 | 930 | 1,090 |
| 12. | SNAAG | 2 | 2 | 4 | 4 | 1 | 3 | 80 | 90 |
| 13. | Gedo | 3 | 6 | 10 | 10 | — | 3 | 36 | 156 |
| 14. | Bakool | 2 | 4 | 5 | 5 | — | 1 | 68 | 126 |
| 15. | Baydhabo | 2 | 3 | 14 | 14 | 2 | 2 | 125 | 185 |
| | **Total** | **63** | **79** | **205** | **205** | **24** | **52** | **5,087** | **6,699** |

There are at present few qualified national physicians and other professional personnel. At the moment, in addition to 104 qualified Somali doctors, 64 expatriates are working in the country. Only a limited number of Somali doctors are specialised in the key areas required for development of modern health services, such as public health services administration, epdemiology, child-health and welfare etc. It is of great importance that national personnel of all categories should be trained and oriented to tasks which have been nationally determined and which will form the basis on which a national health programme could be built up. Therefore a manpower development policy in the field of health is crucial and health training programmes will be initiated for categories of health personnel within the country itself, so as to reduce dependence on training abroad only to a minimum for some of the more sophisticated fields of specialisation. To achieve this objective, a medical faculty has been established in the national university for training medical graduates. Training programme for other categories will be expanded by increasing the intake into existing institutions and by establishing a nursing school at Kismayu in 1977.

The scope of hospitals have been gradually becoming wider. In addition to the bed care of the seriously sick, the hospitals are now giving proportionate attention to out-patient services Following recent advances in medical science, a wide range of diagnostic and treatment services are now being offered by the hospitals both to in-patient and out-patients. Some of these services are very expensive requiring complex and delicate equipment and specially trained staff.

For economic considerations, it is necessary to integrate all curative and preventive activities into a global health services. In this concept, the hospital is responsible for all activities including the out-patients and preventive services in the community served by the hospitals. The hospital thus ceases its separate entity and becomes a multi-purpose institution within the complex of the health services. This transformation increases the importance of the hospitals at the technical and social level. For this concept to be effective, it is imperative that the senior staff members in the hospitals must not limit their activities and interest to the internal functions of the hospitals. The ultimate improvement of health in a district depends how-well the hospital is able to support the preventive services and how effectively it penetrates the communities for achieving the objectives of beneficial changes. Such a policy will provide a general guide-line for the development of hospital facilities during the Programme period. Another important determinant of the range of hospital services is the size of the institutions. A large hospital generalyly can offer a wider range of services than a small one. If an effort is made to provide adequate hospital services to all, resources may be spread too thinly as to be of little benefit to any body. The communities living in sparesely populated areas of the country are thus often at a disadvantage but it is proposed to limit this disadvantage as far as practical within the Programme by maintaining overall efficiency of services throughout the country. On these technical considerations, it is proposed either to upgrade existing hospitals or to construct new hospitals at thirteen regional headquarters and to equip these to a level so that essential services can be competently provided. In addition to these district hospitals will also be strengthened and 15 new hospitals constructed. At the end of the Programme period the country will have 79 well-equipped hospitals outside the capital city to serve in areas of greatest need.

## PROJECTS

### 1. Strengthening of Existing Hospitals.

The general condition of maintenance of a number of existing buildings is not satisfactory. Very little provision has been made for keeping them in good repair and consequently a great deal will have to be done by way of rennovation and in some cases reconstruction. After completion of these improvements it will be possible to make further use of the accomodation and to improve the working conditions of the staff.

During 1974-1978 it is proposed to strengthen thirteen existing hospitals at regional and district level at a total cost of So. Shs. 3,400,000.

**Marka:**

The present hospital has 50 beds. It is proposed to rennovate this building and double the bed strength by the addition of a new block. Improved laboratory faciltiies will be provided. An X-ray block and a new theatre has already been provided at this institute.

**Jowhar:**

The present hospital which has 54 beds will be improved. Additional diagnostic facilities will be provided. A new block to raise the bed strength to 100 beds will be constructed. The hosptial will have separate male and female wards. Better facilities for storing medicine and equipment will be made available.

**Kismayu:**

The hospital building is old, and is considered beyond economic maintenance. A completely new buildnig will be constructed. The present strength of 160 beds will be maintained, but the new building will provide modern facilities and will be equipped with the essential diagnostic and treatment facilities, in all the major specialities.

**Dusa-Mareb:**

At present there is only a 12 bed hospital. Since this hospital has now to serve as regional headquarters hospital, it is propbsed to construct a new block with fifty beds and provide all the supporting facilities.

**Burao:**

The hospital buliding is old and is in need of a great deal of urgent repair. The operation theatre in particular requires attention. New and modern equipment is required for the wards and out-patient departments. A block for hospital laundry will be constructed and toilet facilities will be improved. All the necessary rennovation work will be carried out during the Programme period so that this hospital can cater for the needs of the major specialities.

**Beletwein:**

The present bed strength of 70 will be increased to 100. In addition, general repairs will be carried out, and new equipment will be installed, and laboratory facilities provided.

**Carowe:**

Facilities for the treatment of six patients exist at present, but demand for patient-care has increased. Consequently a new building to accommodate 50 patients will be constructed with an operation theatre and other auxiliary facilities.

**Galkayo:**

Rennovation of the existing building will be undertaken. Diagnostic facilities will be extended, new equipment will be provided for the operation theatre and sterlization room.

**Baidoa:**

Although the hospital building is reasonably well maintained, there is still need for general improvement and provision of better facilities for paediatric and gynaecological patients. The operation theatre will be rennovated and diagnostic facilities will be expanded. A new kitchen block will be constructed to replace the existing building which is beyond economic repair.

**Hudur:**

The present hospital building consists of a block with accommodation for 18 beds. It is planned to increase the bed strength to 50, by the addition of a new block. Rennovation will also be carried out to the existing building and improved diagnostic facilities will be provided.

**Garbaharrey:**

A new hospital building to accommodate 50 patients will be constructed. Necessary supporting facilities in the way of an uptodate operation theatre and laboratory will also be provided. The hospital will be converted into a Regional hospital.

**Mogadishu:**

General hospital Mogadishu has a modern building with uptodate diagnostic and treatment facilities. Considerable expenditure will be incurred on the maintenance of existing building and replacement of equipment. Modern equipment for rehabilitation and occupational therapy departments, will be provided during the plan period.

**Hargeisa:**

General rennovation of the existing hospital blocks including the outpatients will be carried out. Children's unit and TB ward will receive special attention and provision for the treatment and isolation of infectious diseases patients will be made. Operation theatre facilities will be improved with the provision of new equipment and addition of an orthopaedic unit.

**Bosasso:**

General repairs will be carried out and major alterations will be made to improve the diagnostic facilities. Surgical units will be completely rennovated and facilities for the treatment of gynaecological patients will be modernized.

## 2. New District Hospitals:

During the Programme period, it is proposed to establish 15 new hospitals at district headquarters. One of these hospitals will be established at Bulo-Hawo and will have provision for 50 beds. This hospital will have all the modern diagnostic facilities including X-ray. A well equipped operation theatre will also be attached to this hospital.

The other hospitals will be constructed at the follownig places:

1. **Badade**
2. **Elwake**
3. **Dolo**
4. **Jalalaqsi**
5. **H. Dere**
6. **Abudwaq**
7. **Lughaye**
8. **Yet**
9. **Adale**
10. **Garadag**
11. **Qansah-Dhere**
12. **Taleh**
13. **Bulo-Xawo**
14. **Saakow.**

The hospitals will be provided with ten beds each. They will have diagnostic facilities; one midwife and four nurses will be posted in each hospital, with special responsibilities to persue the overall policy of providing an integrated service to the communities.

The capital cost of the project will be So. Shs. 1,755,000 and the recurrent cost during 1974-1978 will be So. Shs. 2,872,710.

## 3. Mental Hospitals:

At present there are only 316 beds for patients suffering from various mental diseases, 250 of these are in Forlanini Hospital, Mogadishu. These beds are considered grossly inadequate to meet the need, both in terms of physical accommodation and the treatment facilities available for the patients.

It is proposed to construct and equip two more mental hospitals during 1974-1978 located in Mogadishu and Hargeisa. In Mogadishu a new mental hospital will replace the existing metal beds available in the Forlanini hospital and will have a capacity of 400 beds. A second hospital with 200 beds will be constructed in Hargeisa. In these hospitals separate accommodation will be provided for acutely sick patients and for those who need occupational therapy aimed at early rehabilitation.

The cost of the project consists of capital expenditure of So. Shs. 5,320,000. Recurrent expenditure of So. Shs. 6,461,300 will be needed during 1974-1978.

### 4. Tuberculosis Hospital Mogadishu:

Tuberculosis is one of the most prevalent diseases in the country. There are at present over 800 hospital beds exclusively for TB patients in the Forlanini Hospital which was built over 40 years ago when Mogadishu was much smaller town.

The number of TB patients has been increasing during the past years, and it is essential that a separate hospital should be constructed away from the city, exclusively for the treatment of TB patients. A project for a hospital to accommodate 1,000 patients was included in the Development Programme 1971-1973. However, the project has not been implemented due to shortfall in resources. It is therefore proposed that the hospital will be established during the period of the 1974-1978 Programme. This hospital is intended to be the chest diseases hospital in the country and patients affected by various chest or respiratory diseases such as cancer of lungs, TBC will be treated.

The hospital will also be used as a teaching hospital for students of the Medical Faculty and is planned at a medium to high health institution standard.

The construction cost of the hospital will be So. Shs. 40.3 million and the recurrent cost during the five-year period will be So. Shs. 3.86 million.

### 5. Regional Hospitals for Tuberculosis

In addition to improvements and extension to various institutions already referred to under appropriate sections, and provision of ambulatory treatment to tubercular patients through the out-patient departments in all hospitals and clinics in the country, it is proposed to establish four new hospitals of hundred beds each for acutely sick TB patients in the Regions..

The Government is conscious of the favourable results that can be achieved by modern TB control methods, involving prophlaxis, early diagnosis and treatment by potent drugs that are now available. It is however felt that in the peculiar circumstances prevailing in our country these activities must be supported by the provision of hospital beds for those who live in distant areas and cannot travel long distances for procuring the medicine and for those who need constant supervision because of the nature of their disease.

These hospitals will have whole-time specialist doctors on their staff, and modern diagnostic and treatment facilities will be made available. The staff will receive special orientation training, so that their activities support and supplement the activities of the National TB Control Programme.

The capital cost of the project is So. Shs. 2,910,000 and the recurrent cost is So. Shs. 2.928,240 for 1974-1978.

## 6. Communicable Disease Hospital

There is an urgent need for providing accommodation for the treatment of patients suffering from various infectious disease. Isolation of cases of communicable diseases is an essential element in the control measures against these diseases. At present this service is provided by the Forlainini Hospital in circumstances which are far from satisfactory.

It is therefore proposed to construct a new hundred-bed hospital. It will be equipped and staffed in manner that it can also serve as field training unit for the Medical Faculty of the National University. The building will consist of small units, which will be so arranged that each ward will be self-contained and it will be possible to put into operation modern isolation procedures for individual units according to the needs and technical requirements.

The hospital will cost So. Shs. 710.760. The recurrent cost for the five-year period will be So. Shs. 3,612,760.

## 7. Medical University Hospital

With the establishment of a Medical Faculty at the National University, it has become essential to provide adequate facilities for clinical, laboratory and field experience to the students. In respect of supervised clinical experience, about eight beds per student in hospital wards is considered a minimum essential requirement. While some of these beds are to be provided by the General Hospital, the TB Hospital, The Maternal Gynaecological Hospital, etc., it is important that at least three beds per student be provided in a special University Hospital, where all facililities in terms of personnel, equipment, medication etc., are made available for the promotion of teaching and research. This University Hospital will provide the students the best that medical science has to offer, while the general and other hospitals will supplement this experience by exposing the students to the realities of the situation, under the limitations as they exist.

To meet these special requirements, it is proposed to construct a 400-bed University Hospital. This hospital will have facilities for the diagnosis and treatment in all the major specialities. While the primary objective of the hospital will be to provide supervised clinical experience to the medical students, it will also indirectly fill the need for specialized treatment of most complicated cases.

The capital cost of the project will be So. Shs. 6,150,000 with a recurrent expenditure of So. Shs. 6,436,540 for the five-year period.

## 8. Maternity and Paediatric Hospital

The two main hospitals in Mogadishu have maternity and paediatric wards. However, there is need for a special maternity and paediatric hospital with 200 maternity and 100 paediatric beds to be built in the centre of Mogadishu to replace partly De-Martino Hospital which is almost in a dilapidated condition. Moreover, it is likely that the location of the new Mogadishu port will require the shifting of the Hospital to a new site. A project for establishing such a hospital was included in the Development Programme 1971-1973 but could not be implemented due to lack of finance. The 1974-1978 programme therefore, proposes to implement this project at a cost of So. Shs. 10 million. The recurrent cost during the five-year period will be So. Shs. 7,412,480.

## 9. Nutrition Department

Nutritional status of a community as assessed through well organized surveys is a good index of the general health needs of the population, particularly the infants and the children. Remedial actions aimed at specific nutritional deficiencies can be rewarding in more ways than just the immediate visual results as reflected in the changes in physical status.

Improvement in nutritional status is of fundamental importance to national health, but to be successfull requires the coordinated effort of the Ministries of Health, Agriculture, Education and Information and National Guidance all of whom have a key role to play.

This coordination is planned to be achieved by the establishment of a Nutrition Board with the following objectives :-

i. To orient food and nutrition policies towards the achievement of medium-range and long-range goals;

ii. To ensure close cooperation between the Ministries of Health, Agriculture, Education and Information and National Guidance.

iii. To carry out research.

iv. To train auxiliary personnel.

The Nutrition Department of the Ministry of Health will act as the Secretariat to this Board and also take steps to implement the policies of this Board. The Department will have the following four sections :-

i. Operational Section :

  (1) Nutrition education of the public
  (2) Applied nutrition programme
  (3) Feeding programme

ii. Research Section :

  (1) Nutrition surveys
  (2) Dietry surveys
  (3) Market surveys
  (4) Other surveys in relation to food habit taboos, home economics.

iii. Training Section :

(2) In-service training to personnel of other departments

(3) Training of new nutrition staff

(4) Production of audio-visual aids

iv. Statistical Section: Collection of statistical data for the evaluation of the progress of the programme.

The capital cost of the project will be So. Shs. 816,000. Recurrent cost will be So. Shs. 1,510,120 during 1974-1978.

### 10. Public Health Wings

During the programme period it is proposed to establish 30 public health wings through upgrading of existing ambulatories at selected district headquarters.

These Public Health Wings would be supplied with equipment and drugs, etc. Buildings will be constructed to provide accommodation for the diagnosis and treatment of patients, including injections, dreesing along with waiting rooms. Each Public Health Wing will have facilities for ante-natal and post-natal care and the health care of infants and school children. It will have a small laboratory, a dispensary and storage space for records and offices for staff. A protected water supply and two sanitary latrines would be provided.

The functions of the Public Health Wings will be :-

a) Health care of the mothers and children including the school children.

b) Detection, treatment and preventions of common diseases.

c) Enviornmental hygiene.

d) Immunization and assistance in mass treatment campaigns.

e) Execution of nutritional for simple laboratory procedures.

g) Maintenance of records and health statistics.

h) Health education.

Each Public Health Wing will be provided with the services of a team of well-trained staff, which will include one health inspector, 3 public health mid-wives and nurse.

The Public Health Inspector will be the team leader and supervise the overall activities of the unit. He will be directly responsible for the supervision of enviormental hygiene, disposal of refuse, excreta, etc. food hygiene and insect control.

Public health nurses will provide ante-natal and post-natal care. They will undertake domiciliary midwifery work and attend to immunization and other measures for the prevention of communicable diseases. They will promote infant and child care and will supervise the health of school children.

The nurses will also attend to sick-patients and will provide medical treatment and arrange for referral to district hospitals, from where ambulance will be provided for the transportation of seriously sick patients.

The capital cost of the project will be So. Shs. 3,080,000. The recurrent cost will be So. Shs. 12,529,200 during 1974-1978.

### 11. Endemic Disease Control-Mobile Teams

In Somalia, the situation in respect of morbidity and mortality due to communicable diseases is in general terms similar to what exists in most of the other developing countries. Although due to lack of reliable statistics it is difficult to state the exact magnitude of the problem, it is believed that at least 60% of the morbidity and mortality is due to communicable diseases that can be easily controlled by the application of simple preventive measures. Static medical facilities at present are not capable of providing adequate coverage on a geographical basis. The situation is further complicated by the scattering of population over large areas and the nomadic way of life on a major part of the population. Consequently there is an epidemiological vacuum in sparsely populated peripheral areas which makes it impossible to apply any meaningful preventive measures.

To make preventive activities economically feasible, mobile teams with multi-purpose objectives appear to be the most practicable solution for rural and nomadic communities. It is proposed to establish 20 such teams. Each team will be made responsible for activities in three dis-

[illegible], in areas where no static health unit is in operation. These teams would be composed of specially trained technicians, who may be entrusted with all or some of the following duties :

a) The establishment of a system of disease surveillance broadly applicable to a variety of communicable diseases. Such a surveillance system would include effective disease reporting mechanism, for epidemiological field investigations of special problem areas, and importation of educative techniques designed to acquaint responsible medical and para-medical personnel with current problems and developments relating to the occurance and control of communicable diseases.

b) The administration of vaccines and other preventive medications, including continuing programmes of immunization of the new-born, and developments of maintenance vaccination schedule, which may be operatively feasible in a mobile recycling programme.

c) Development of health education programme, with a view to promoting public participation, and generating public support for the preventive aspects of health programme.

d) Develop skills in general health personnel for simplified statistical sampling techniques which will permit rapid assessment of diseases problems.

e) Develop methods that can be applied to cohorts of nomadic population to gain understanding of some of the factors influencing epidemiological patterns of communicable diseases in these communities.

) To take all action as indicated for preventing the introduction of a disease and reversing the course of a newly introduced infection in a community, by the application of epidemiological surveillance techniques, and containment measures.

The scheme involves the combination of some of the simple procedures of passive and active surveillance along with the consolidation of activities considered essential for health promotion. Efforts would be concentrated within a simple frame-work with the main objective of preventing the regional health administrations from embarking on sophisticated programmes which may be expensive and yield a lower return in terms of improved health.

The capital cost of the project will be So. Shs. 800,000. Recurrent cost will be So. Shs. 4,535,720 during 1974-1978.

## 12. Biological Laboratory

To achieve optimum results from the programmes that are being developed for the control of communicable diseases, it is considered essential that research laboratories with the objective of studying various aetiological and epidemiological implications should be established within the country. It is accordingly proposed to establish a Biological Laboratory with foreign collaboration and with the following objectives :-

a) To carry out a thorough study of the infectious diseases of man and animals on the whole territory of the country with the aim of detecting the hot-beds of infection and the development of measures to combat them.

b) To take part in epidemiological analysis and identification of the the outbursts of especially dangerous diseases.

c) To cooperate and coordinate with the regional laboratories in the country.

Somali research scholars along with their colleagues from abroad will initiate research studies and carry out programmes of sophisticated training in research techniques for selected students in the field of medicine and biological science.

While the capital cost of the project has not been fully established, the project will require So. Shs. 3,267,000 as recurrent expenditure for five years.

## 13. Central Public Health Laboratory

It is proposed to develop this laboratory so that it can perform the following functions :-

[illegible] district laboratory for Mogadishu and its district

2. To act as reference laboratory for all existing laboratories of the country.

3. To be the central station for laboratory examination concerned with - Clinical pathology, microbiology and serology
   — Epidemiological microbiology
   — Control of enviroment (food and water control)

4. To serve as a training and refresher centre for the laboratory personnel, physicians and nurses.

5. To participate in studies in regard to the epidemiology of infectious, parasitic and nutritional diseases.

To enable the laboratory to perform these functions efficiently, it is proposed to organize or reorganize the following departments/sections in the laboratory :-

1. Bacteriological Department
2. Serological Department
3. Virological Department
4. Mycological Section
5. Environmental control section (water, food control)
6. Hystopathological Section.

A modern animal house will also be built to provide support to the above department, and a library will be built for the use of the workers and trainees.

The plan envisages the construction of a new double story building at a cost of So. Shs. 1,000,000. It will house about thirty laboratories to perform the above noted functions and to provide supporting services.

The total capital cost of the project will be So. Shs. 1,340,000. The recurrent cost will be So. Shs. 1,160,280 during 1974-1978.

## 14. Regional Public Health Laboratories

For increasing service coverage, it is proposed to establish three laboratories at Regional Headquarters. In these laboratories also, as far as possible and in a phased manner, all the departments described in the project for the Central Health Laboratory will be developed. Special emphasis will be placed on enlarging the scope of the laboratories so that they participate effectively in epidemiological surveillance. Efforts will be made to appoint specially trained and qualified technicians so as to improve the quality and reliability of these laboratories.

The capital cost of the project will be So. Shs. 820,000. Recurrent cost will be So. Shs. 1,547,360 during 1974-1978.

## 15. State Social Insurance Agency (CASS)

The State Social Insurance Agency has planned to expand its activities during 1974-1978.

The following health units will be constructed :

1. Berbera (1975
2. Kismayu (1975)

| | | |
|---|---|---|
| Cost : | Capital Expenditure | 600,000 |
| | Recurrent Expenditure | 1,500,000 |
| | Total | 2,100,000 |

Dispensaries will be constructed in :-

a) Jowhar (1974)

b) Laskore (1975)

c) Fanole (1976)

The total cost of the dispensaries will be :-

| | |
|---|---|
| Capital Expenditure | 210,000 |
| Recurrent Expenditure | 747,000 |

The Ministry of Health will provide doctors for the Kismayu and Berbera health units.

### 16. Kismayo Nursing School

In order to reduce the permanent shortage of trained nurses in Somalia, the Ministry of Health proposes the building of a nursing school in Kismayu. The location of this school in that area is important, because it is intended to supply graduates to the Lower and Upper Juba regions.

The construction of the School will be done in 1976 so that it will start to enroll the first group of students in 1977.

The yearly enrollment will be 60 students. The capital cost of the project will be So. Shs. 2,440,000. Recurrent cost during the Programme period will be So. Shs. 2,010,400.

### Other Health Activities :

In addition to the development project included in the 1974-1978 Programme the following projects supported by the World Health Organisation and which were included in the Development Programme 1971-1973 will be continuing in the new Programme period.

1. Malaria pre-eradication programme
2. Tuberculosis control and training programme
3. Small-pox eradication
4. Basic health services
5. Nursing education
6. Health personnel training institute.

Since these are new well-established projects they are not included in the new Development Programme but will be continued on a regular basis and financed out of the ordinary budget of the government.

A project for establishing an Institute for Indigenous Medicines of the country is being included as part of the project of establishing a medical college and faculty under higher education. In a like manner, the establishment of manufacturing facilities for human and animal medicines and drugs in a new Pharmaceutical Institute is included among projects in the industry sector.

## DEVELOPMENT PROGRAMME 1974 - 1978

SECTOR: Health — TOTAL INVESTMENT

| Sl. No. | PROJECTS | 1974-78 | 1974 | 1975 | 1976 | 1977 | 1978 |
|---|---|---|---|---|---|---|---|
| 1. | Strengthening of Hospitals | 3,400,000 | 1,200,000 | 700,000 | 700,000 | 400,000 | 400,000 |
| 2. | District Hospitals | 1,755,000 | 555,000 | 390,000 | 270,000 | 270,000 | 270,000 |
| 3. | Mental Hospitals | 3,320,000 | — | 1,800,000 | 1,060,000 | 460,000 | — |
| 4. | T.B. Hospital, Mogadishu | 40,270,000 | 6,000,000 | 10,276,000 | 12,000,000 | 12,000,000 | — |
| 5. | T.B. Hospitals, Regional | 2,010,000 | — | 483,000 | 496,000 | 509,000 | 522,000 |
| 6. | Communicable Disease Hospital | 710,000 | 550,000 | 160,000 | — | — | — |
| 7. | Medical University Hospital | 6,150,000 | 2,000,000 | 4,150,000 | — | — | — |
| 8. | Maternity & Paediatric Hospital | 10,0000,000 | 5,000,000 | 5,000,000 | — | — | — |
| 9. | Nutrition Department | 816,000 | — | 264,000 | 184,000 | 184,000 | 184,000 |
| 10. | Public Health Wings | 3,080,000 | 480,000 | 1,160,000 | 480,000 | 480,000 | 480,000 |
| 11. | Mobile Teams | 800,000 | 200,000 | 600,000 | — | — | — |
| 12. | Biological Teams | NIL | NIL | NIL | NIL | NIL | NIL |
| 13. | Central Public Health Laboratories | 1,340,000 | 80,000 | 1,020,000 | 80,000 | 80,000 | 80,000 |
| 14. | Regional Public Health Laboratories | 820,000 | — | 200,000 | 240,000 | 240,000 | 140,000 |
| 15. | Health Units Dispensaries (CASS) | 810,000 | 70,000 | 670,000 | 70,000 | — | — |
| 16. | Kismayu Nursing School | 2,440,000 | — | — | 800,000 | 1,640,000 | — |
|  | **TOTAL** | **77,721,000** | **16,135,000** | **26,867,000** | **16,380,000** | **16,263,000** | **2,076,000** |

# XII. HOUSING PROGRAMME

The development of a satisfactory housing programme for the increasing urban and rural population is of crucial importance in all developing countries, the provision of living quarters with minium standards for the working population in towns and villages is a basic goal that has to be pursued on its own right. Housing and other construction activities are also some of the few areas that have strong backward linkage effect and therefore are effective stimulants to economic development and employment generation. The provision of adequate housing programmes are however preconditioned by the availability of a number of factors: sufficient production of local building materials , qualified manpower , allocation of resources and provision of credit facilities, proper town and physical planning and adequate and unified building codes and regulations. All these pre-requisites have to be adequately developed and strengthened in Somalia. Most of building materials except for minor items are all imported. There are encouraging signs that a large resource of building materials are available to bring this nation to almost self- sufficiency in building materials. While there have been a dearth of qualified manpower to carry out an extensive housing programme, experience shows that with the deployment of the scattered technical hands supported by the necessary equipment and logistics the nation could undertake the construction programme emanating from housing schemes. Housing credit is not properly developed. The small credits that have trickled down to housing and construction activities were made available to well-to-do builders and real estate owners: for the majority of population, housing loans were as inaccessible as the large villas that are built for the few in the high income groups, of the diplomatic corps and expatriate personnel. The growth of urban settlement in Somalia has not been planned; it has proliferated with virtual absence of town and physical planning. This involves a tremendous waste in space and remedial actions can only be undertaken at an extremely high cost. The absence of unified building codes and regulations has made housing development all the more expensive. In the light of these problems the government will explore all possible avenues to ensure the development of the housing scheme in the Programme period. The major objectives in this important social sector are to :

i. Contain the housing shortage in all urban centres;

ii. Introduce government intervention in the development of rural housing;

iii. Develop a building materials industry with the view of making the country approach self-sufficiency and to save badly needed foreign exchange.

iv. Undertake basic town and physical planning in the major urban centres and to initiate the establishment of unified building codes and regulations.

**1. Housing Construction** : There is a severe shortage of housing in all the urban centres of the country. It is estimated that about 54,663 houses are now immediately required for the homeless and those living in substandard houses in 18 major townships in the country. Mogadishu sustains 48 percent of the national housing shortage because of high centralisation of government services and the consequent influx of rural population seeking better living conditions into the capital. Other major cities that suffer from housing shortage are Hargeisa, Kismayu and Berbera.

Housing shortage is also vividly visible in rural areas which because of the envisaged expansion in agricultural development require urgent and immediate attention to solve the housing problem. The housing shortage in rural areas has not been taken congnizance of in the earlier programme and the problem is enhanced by the increased government intervention in those areas and the recent policy of decentralisation of the government services. The conventional structures in the rural areas present an ever-present hazard to life and property of the peasantary which have to be satisfactorily solved.

Assuming a seven percent growth rate of urbanisation in Mogadishu and slightly lesser percentage in other urban centres, the total urban population will increase from its present level of 580,000 to 813,480 in 1978. In order to keep abreast with the population growth, 46,696 new houses will be required. Adding up the growth requirement and the current housing shortage emanating from real absence of housing and urban renewal, 101,359 houses have to be constructed by 1978.

It is difficult financially for the nation to carry out a programme aiming at meeting the housing requirements in full within five years. Hence the objective is to contain the existing shortage and to ensure new houses for the increased population. In the Programme period, 46,695 new houses will be constructed in urban centres and 36,900 rural houses in agricultural areas.

The housing programme in its limited objective will be an enormous responsibility for the government to carry out single handedly. The other sectors demand equal or much more attention specially the productive sectors of the economy. The government will therefore develop only 13,650 new urban houses to be distributed mainly among Mogadishu, Hargeisa, Kismayu, Berbera and other major industrial areas of the country as shown below :

## DISTRIBUTION OF GOVERNMENT PROGRAMME

| | 1974 | 1975 | 1976 | 1977 | 1978 | Total |
|---|---|---|---|---|---|---|
| Mogadishu | 1,000 | 1,250 | 1,500 | 1,750 | 2,000 | 7,500 |
| Hargeisa | 280 | 350 | 420 | 490 | 560 | 2,100 |
| Kismayu | 160 | 200 | 240 | 280 | 320 | 1,200 |
| Berbera | 100 | 125 | 150 | 175 | 200 | 750 |
| Others | 280 | 350 | 420 | 490 | 560 | 2,100 |
| **Total** | **1,800** | **2,275** | **2,730** | **3,185** | **3,640** | **13,650** |

Additional 7,136 rural houses will be developed. The total investment of the government housing programme is So. Shs. 156,632 million. The balance of the housing requirement, will be left for the private sector which will be encouraged to the full extent possible by government organs and banking institutions.

There are a number of government organs that are involved in housing activities. Some of these are the Police, Army, some Municipalities and the Ministry of Interior, besides the Ministry of Public Works. The Ministry of Public Works and its technical wings, in housing, the National Housing Agency involve in the development of low cost housing pragramme. It is of utmost necessity to coordinate the activities of these organs to reduce cost, increase efficiency and enhance effectiveness of the porogramme. It is the strategy of the Programme to make all government organs participate in the implementation of the housing programme. The municipalities will play a vital role in housing development and so also the armed forces and the autonomous agencies.

**2. Building Materials** : The development of housing programme commensuate with the needs of the working masses is preconditioned by development of local cheap building materials. Somalia is badly placed in this respect not so much for the absence of construction materials, as for their development. At present 85 percent of the construction materials are imported at an increasing high cost which constitute a major prohibiitng factor to low cost housing programme. With the increased urbanisation the total import bill has increased from So. Shs. 14.4 million in 1966 to So. Shs. 29.8 million in 1972, an annual growth rate of 12.6 percent. With government commitment to enlarged housing programme under the Programme, the national requirement for building materials will increase tremendously. The housing Programme for 1974 entail an expenditure of So. Shs. 59.1 million in building meterials. It is incumbent upon the government therefore to utilise local building materials to save the badly needed foreign exchange and to facilitate the government intervention in housing for social development.

Already some headway has been made in material development. The reactivation and modernisation of the brick factory at Afgoi and the Soplast plant in Mogadishu have been implemented and preparatory work for construction of a cement factory at Berbera has also been carried out. In the 1974-1978 Programme a number of projects that aim at creating a postive basis for self-sufficiency in building materials are incorporated, and the construction of the proposed plants will create favourable conditions for the development of a national building materials industry and will provide the housing and public building Programmes with the minimum materials. The smallness of the local market has been the main stumbling block in the development of construction materials. The large construction Programme will reduce the effect of this Problem and availability of markets in the neighbouring countries warrant bold initiative in the development of a building materials industry.

**3. Control Unit for building material** : The importance of building material for the national economy necessitates the establishment of a technical unit responsible for its devedopment under the Ministry of Public Works which will work in close collaboration with the Ministries of Mining, Industry, and Planning and Coordination. The unit will undertake all research pertaining to the building material development, collect and collate all data on production, consumption and import of the materials, and follow up world production and prices of all construction materials.

with special reference to neighbouring countries and advise the government on policies of building materials development.

**4. Creation of laboratory** : The unit responsible of research and development of building materials cannot adequately excute its functions without the necessary apparatus specially a technological laboratory and capable technical personnel. The laboratory is essential for testing locally manufactured and imported building materials, for investigating the local raw materials and for conducting test on new building materials not produced in the country. The unit will also advise the government on standardization of building materials and the creation of national building codes. So. Shs. 350,000 is earmarked for the laboratory and the personnel required will be depolyed from the Ministries of Public Works, Mining and Industry.

## GOVERNMENT INVESTMENT IN HOUSING

| | 1974 | 1975 | 1976 | 1977 | 1978 | Total |
|---|---|---|---|---|---|---|
| Urban Housing | 20.202 | 25.280 | 30.603 | 35.679 | 41.300 | 153.064 |
| Rural Housing | 858 | 790 | 722 | 640 | 558 | 3.568 |
| Building Materials Development | 100 | 120 | 130 | — | — | 350 |
| | 21.160 | 26.190 | 31.455 | 36.319 | 41.858 | 156.982 |

## HOUSING CONSTRUCTION

| | 1974 | 1975 | 1976 | 1977 | 1978 | Total |
|---|---|---|---|---|---|---|
| Mogadishu | 1000 | 1250 | 1500 | 1750 | 2000 | 7500 |
| Hargeisa | 280 | 350 | 420 | 490 | 560 | 2100 |
| Kismayo | 160 | 200 | 240 | 280 | 320 | 1200 |
| Berbera | 100 | 125 | 150 | 175 | 200 | 750 |
| Others | 280 | 350 | 320 | 490 | 560 | 2100 |
| **Sub-Total** | 1820 | 2275 | 2730 | 3185 | 3640 | 13650 |
| Rural Housing | 1715 | 1580 | 1445 | 1281 | 1115 | 7136 |
| **Grand Total** | 3535 | 3855 | 4175 | 4466 | 4755 | 20786 |

## FINANCING: Housing Construction (in '000' Shs.)

| | 1974 | 1975 | 1976 | 1977 | 1978 | Total |
|---|---|---|---|---|---|---|
| Budget | 1.000 | 1.500 | 2.000 | 2.500 | 3.000 | 10.000 |
| Pension Fund | 8.064 | 9.656 | 11.580 | 13.422 | 14.648 | 57.370 |
| Local Loans | 3.996 | 4.914 | 5.743 | 6.397 | 8.210 | 29.262 |
| Foreign Loans | 8.000 | 10.000 | 12.000 | 14.000 | 16.000 | 60.000 |
| | **21.060** | **26.070** | **31.325** | **36.319** | **41.858** | **156.632** |

# XIII LABOUR, EMPLOYMENT AND TRAINING

## The Setting and Strategy of Development

Estimates of labour force in Somalia for the years 1950-1980 show that by 1980 there could be 1.4 million in the labour force for a population of 3.7 million persons. With estimated population of 1.8 million in 1950 of which 794,000 were in the labour force, growth in labour force upto 1960 was at an annual rate of 1.66% while between 1965-1970 the growth rate was estimated to be 2.7%. For the five years between 1970-1975 estimated growth rate for labour force is 2.81%.

The manpower survey undertaken in the country in 1971 has presented manpower situation in that year and has also made projections into the demand and supply in employment upto 1976. According to this study which has not enumerated employment in agriculture, livestock, forestry and fishery activities by members of households in the unorganised sector, 67,204 workers were estimated to be employed by the private sector. This estimate includes some of the fishermen who are engaged in fish processing industry in the country. In the public sector a total of 41,173 persons were reported employed of which 14,140 were employed by the Ministries and Departments while the rest were employees of autonomous agencies and municipalities and the Crash Programme. The following table gives a summary of employment in 1971 by industry group for the country as a whole.

| Industry Group | Private Sector | Public Sector | Total | Percent |
|---|---|---|---|---|
| 1. Agr. Animal Husbandry, fishing and related services | 245 | 11039 | 11284 | 10.41 |
| 2. Mining and Quarrying | 392 | 63 | 455 | 0.42 |
| 3. Manufacturing | 8287 | 2370 | 9907 | 9.83 |
| 4. Electricity, Gas & Water | 369 | 1446 | 1815 | 1.17 |
| 5. Construction | 4075 | 2011 | 3086 | 5.62 |
| 6. Commerce, Restaurants and Hotels | 33,334 | 4443 | 31417 | 34.18 |
| 7. Transportation & Communication | 14,075 | 6015 | 9090 | 18.54 |
| 8. Finance, Insurance and Busniess services | 1,649 | 922 | 2571 | 2.37 |
| 9. Public Administration, Community and Personal rervices | 4,758 | 12864 | 17218 | 16.26 |
| Not stated | — | — | — | — |
| **Total** | **67,204** | **41173** | **108377** | **100.00** |
| **Percent** | **62.01** | **37.99** | **100.00** | |

The projections of manpower requirements during the period 1972-1976 shows that at the end of 1976 the additional requirement could be 51,568 persons of which 34,296 will be in the public sector and 17,272 in the private sector. The following table summaries the distribution of these workers by occupation groups under the columns normal requirement, requirement due to attrition and total requirement for the public and private sectors.

## SUMMARY OF MANPOWER REQUIREMENTS BY OCCUPATION GROUP 1972-1976

| Occupation Group | Public Sector | | | Public Sector | | | |
|---|---|---|---|---|---|---|---|
| | Normal Req. | Attration | Sab-total | Normal Req. | Attration | Sab-total | Total |
| 0. Professional Workers | 1414 | 124 | 1538 | 26 | 25 | 51 | 1589 |
| 1. Technicians | 4991 | 491 | 5482 | 92 | 151 | 243 | 5925 |
| 2. Administrative, Managerial and Execut. Workers | 535 | 78 | 613 | 57 | 31 | 96 | 709 |
| 3. Clerical and Related Workers | 4441 | 470 | 4911 | 346 | 417 | 763 | 5674 |
| 4. Sales Workers | 1919 | 102 | 2019 | 3412 | 3459 | 6871 | 8890 |
| 5. Service Workers | 2956 | 321 | 3277 | 1425 | 1277 | 2702 | 5979 |
| 6. Animal Care-takers, Gardeners and other agricultural workers | 1035 | 119 | 1154 | 57 | 111 | 168 | 1322 |
| 7/8/9 Production and skilled workers | 4033 | 616 | 4649 | 2498 | 1886 | 4384 | 9033 |
| Part 9 labourers | 9214 | 1439 | 10653 | 1397 | 597 | 1994 | 12647 |
| **Total** | **30536** | **3760** | **34296** | **9310** | **7962** | **17272** | **51568** |

In addition to these, a total of 8000 workers will have to be included due to employment generation by the Crash Programme. A total of 59,568 additional workers will make the total of employment 167,945 in the non-agricultural sector of the economy, of which 83,469 will be employed in the public sector and 84,476 in the private sector. Based on these results, the following conclusions are drawn. At the end of 1971 employment in the non-agricultural part as defined earlier was far greater for the private sector than in the public sector, being 67,204 and 41,173 respectivelly. If employment practices are relaxed to permit requirement of workers to fill up all additional requirements, than the 1976 employment in the public sector will be nearly equal to that in non-agricultural private sector. It is also seen that during the period 1972-1976, the manpower requirement of government Ministries, departments, autonomous agencies and the municipalities will be twice as large as that of the private sector. This ratio will be even higher for particular occupation groups.

The projections of additional manpower requirement has not been made beyond 1976 but these projections give some indications of the additional intensified training requirements in the country for the various occupations in the public and private sectors. The training programmes will need to take into account the requirement of persons to fill existing vacancies, cover replacement needs, meet additoinal future requirements as wel l as retrain and upgrade the presently employed workers. The latter reqirement has a special significance due to the fact that rapid expansion in employment in the private sector has not produced a technically suficient recruitment and inservice programme for those who have been employed. It has also to be noted that during the earlier period low entery requirements were used as a basis for recruitment resulting in the acceptance of labour with limited potential for absorbing future training, particularly those programmes demanding a sound general educational background. This situation has been worsened by the additional fact that inspite of government regulations stipulating that private sector employers should arrange training and apprentice courses for their workers, no systematic follow-up has been made and the private sector establishments have not contributed to any significant degree to training of manpower, in the country. Thefuture training requirement therefore have to carry this additional burden and it is the intention of the government that the various establishments both in public and in the private sector will develop sufficient training facilities to train and upgrade technicians in the country, in addition to formal training programmes under schemes of technical training.

The policies of the present government have consistently been directed towards development of human resources. Recent substantial increases in school enrollment, organisations of training courses in some ministries, the labour campagns to instil the "dignity of labour" in the population as a whole, the Revolutionary Orientation courses for the public servents, youth camps, the use of the Somali language in all official transactions, are some of the major innovations of the government in this connection.

The training requirements of the manpower are still large. In addition to training of manpower which have to be employed in future as economic activity increases, there is need for upgrading the existing labour force both in the public and private sectors. The Manpower Survey of 1971 reported that out of a total of 22,378 persons about whom training needs were ascertained, there are 4,340 with insufficient training, of which 3,430 could benefit from trainings. The proportion of those requiring to total number employed varied from one establishment to another and some personnel at all levels were considered to require futher training. The training needs of employees of the public sector classified by occupation group is shown below : -

| Occupation Group | Number with insufficient training | Number who could benefit from training |
|---|---|---|
| 0. Professional . . . . . . . . | 126 | 119 |
| 1. Technicians & other sup-professional workers . . . . . . | 1,717 | 1,464 |
| 2. Managerial, Administrative and Executive . . . . . . . . | 228 | 156 |
| 3. Clerical . . . . . . . . . . | 868 | 734 |
| 4. Sales . . . . . . . . . . | 7 | — |
| 5. Service . . . . . . . . . . | 118 | 106 |
| 6. Agriculture . . . . . . . . | 310 | 146 |
| 7/8/9 skilled . . . . . . . . | 966 | 730 |
| **TOTAL . . . . .** | **4,340** | **3,455** |

Teachers are classified in this table in group 1 instead of group 0 since most of those requiring training were attached to intermediate or primary schools.

The estimate of training requirement for employees in the public sector falls short of the actual because of the reorientation of administrative policy and set up, which makes assessment of training needs difficult. One case in point in the training requirements of personnel who will be involved in changes due to the implementations of the provisions of the law relating to local government.

Quantification of training requirements in the private sector has been particularly difficult due to the large number of small establishments employing less than five persons who have not been surveyed for this item of information. Even when information is available from the larger establishments these are likely to be under-estimated since employers tend to fill up jobs with whatever trained personnel are available and would not commit themselves to requirements for additional training due to their unwillingness, in general, to assist in providing training. In all those special cases where sophisticated technical training and experience are required, the private sector establishments have the facility of employing expatriate personnel and therefore do not have to upgrade the already employed workers.

The Manpower Survey of 1971 reported 533 workers who require training in the 372 large establishments employing 5 or more persons. Since at the time of the survey education was not nationalised, the 533 workers also included 55 teachers whose training will now be the direct responsibility of the government.

The backlog of training requirements in the public and private sectors as well as the anticipated increase in labour force during the coming years define the range of training facilities which need to be established. Training is a slow process and specialised cadre of personnel in public services, more often, requires longer periods of training to enable them to acquire sufficient experience on-the-job.

The achievements in developing the human resources in the country since theRevolution has been significant. The expansion in facilities for general education at the school level is indicated by the fact that school enrollment increased from about 46,000 in 1970 to 76,000 in 1973. Between 1969 and 1972 the annual rate of construction of classrooms has more than doubled.

There has also been substantial increase in facilities for technical education through upgrading of technical institutes, establishment in 1972 of a four year "Technical Education and Vocational Training Project", expanded teacher-training facilites, the expansion and establishment of a National University with faculties in Education, Law, Economics, Agriculture, Veterinary Science, Medicine and Mathematics/Science as well as through various training courses organised by government Ministries, Departments and Autonomous Agencies. Training programmes were organised by the following Ministries and Agencies, inspite of a number of problems including inadequate financial allocations, shortage of qualified teaching staff, insufficient building space and teaching materials and lack of facilities to determine periodically the training needs :-

1. Ministry of Health,
2. Ministry of Agriculture,
3. Ministry of Posts and Telecommunications,
4. Ministry of Livestock, Forefstry and Range,
5. Ministry of Transport,
6. Ministry of Information and National Guidance,
7. Ministry of Fisheries and Water Transport,
8. Ministry of Industry,
9. National Agency for Trade,
10. Ministry of Finance,
11. Ministry of Public Works,
12. National Water Agency,
13. Somali AirLines
14. National Electricity Agency,
15. Magistrate of Accounts,
16. Ministry of Planning and Coordination,
17. Ministry of Justice and Religion,
18. Government Printing Press,
19. Agricultural Development Corporation,
20. Somaltex,
21. Livestock Development Agency,
22. Various projects sponsored by the Ministry of Industry.

Some of these programmes have covered small numbers of trainees while in the case of the Ministry of Health, the courses have been continuing for a long period of time and a large number of persons have been trained in these courses. In the case of the training programmes in the Ministries, Departments and Agencies, in addition to the well-established programmes, much attention has been recently paid to the designing and commencement of courses in several places. However, much effort and time will be needed before they are established and have an output which can fully satisfy demand.

The achievements of the Somali Institute of Public Administration has to be viewed in this context as that of a specialised institution. Despite several problems and constraints, upto the middle of 1973 it had trained nearly 2000 public service officials in A, B and C categories while 460 clerical and secretarial staff successfully completed courses in the Clerical Training Centre. In a new phase of operations, the Institute in future will expand its range and scope of training activities.

Inspite of the large expansion in education and training facilities in the country, the implementation of the Development Programme 1974-1978 will meet problems of inadequacy of trained manpower. Such inadequacies may also inhibit expansion of the private enterprise in the non-agricultural sectors about which no quantative estimates are presently available. Although supply as measured by the size of the labour force will continue to be in excess of demand, there will be shortages in the labour market due to certain imbalances arising from varoius historical circumstances and the limited facilities for higher education and training in the country during the medium-run.

It is appropriate at this point to highlight the efforts of the governmet to create and train a new cadre of personnel in Revolutionary Youth Camps. This cadre of workers form an integral part of the efforts of the Government for massive rural development which is based on the concept of building up socialism through intensive self-help activities and participation in all other development activities at the local level.

A beginning in this direction was made with the experimental organisation of Summer Youth Camps in 1971 by the Ministry of Education aiming at political and revolutionary education and orientation in five centres for a total of 6,200 youths. This experiment has been followed up by the establishment of Revolutionary Youth Camps.

In addition to the training programme in the Revolutionary Youth Camps, the National Service, the programmes administered by the Ministries of Education, Higher Education and Culture, the National University and the Somali Institute for Development Administration and Management which are discussed elesewhere, mention must be made of the training programmes planned by government ministries, departments and autonomous agencies.

### a) Ministry of Livestock, Forestry and Range

The training programme by this Ministry will consist of :-

a) Continued preparation of professional workers in a variety of fields. A total of 76 persons will thus be trained including 30 of whom are expected to graduate from the National University.

b) At the higher technical level 65 persons will be trained in local institutions and 35 will receive training abroad.

c) At the lower technical level more than 400 workers are expected to be trained in local institutions and programmes.

In addition, 250 animal health inspectors will be trained for a period of about 4 to 6 months.

### b) Ministry of Agriculture

The following broad categories of training programmes will be implemented during the Programme period.

a) Training of a specialised nature provided within multilateral projects.

b) Inservice training roganised locally.

c) Training for farmers.

In quantative terms foreign fellowship will be provided for 26 persons who are attached to projects, and training given to 50 mobile unit operators-cumdrivers, 25 senior officials, 300 field personnel in extension work and 1,500 farmers. Nearly 490 persons will be given training in plant protection work.

### c) Ministry of Fisheries and Marine Transport

While no estimate of the total number of persons who will be trained is readily available the Ministry is committed to the training of personnel necessary for the organisation of the 21 cooperative development centres which will be in operation by 1978. The extent of training required can be gauged from the fact that the 3 cooperative units already established have membership of 420 seamen and 25 onshore workers.

### d) Ministry of Transport

To meet the anticipated demand for trained workers in the field of civil avaition, a project has already been prepared for execution. In the case of the Transport Department, scholarships and fellowship are likely to be available for nearly 62 technicians who will be trained at a high level. Many such training courses will also be available at the proposed new Polytechnic.

### e) Ministry of Posts and Telecommunications

To meet the additional training requirements for new recruits with the increasing growth in the posts and telecommunication services, the Ministry will further increase facilities in the postal Training School. This will enable training of about 200 to 250 postal clerks, telecommunication operators and junior telecommunication technicians during 1974-1978.

### f) Ministry of Health

A total of 490 nurses (including 20 public health nurses), 100 municipal midwives, 65 laboratory technicians and smalle numbers of other medical specialists and technicians are expected to graduate by 1978. Among other things, these programmes will assist in improving the ratio of paramedical staff to highly qualified professional workers such as doctors, raising the doctor population ratio from 1:30,000 in 1974 to 1:10,000 by 1980. Geographical coverage by health personned will improve. The programmes will also train health administrators, instructors, health education personnel to work on problems of enviornmental sanitation and supply counterpart personnel to multilateral and bi-lateral technical assistance projects.

### g) Crash Programme

Over and above the employment generating and production potential of the crash programme, it is framed as a training ground for the volunteers in learning particular skills as well as social awareness in cooperative, self-help activities. By 1974 nearly 10,000 volunteers will be engaged in the Crash Programme. This number is expected to increase substantially during the Programme period and in 1978 the country will have a pool of volunteers skilled in agricultural and civil works tasks in addition to their socially desirable attitude to work and community problems.

## 1. Objectives and Strategy of Development

The objectives and strategy for a rational organisation of labour, employment and training will over and above the programmes to be implemented by the Ministries and Agencies be directed towards the following :-

### a) Employment creation and establishment of machinery for continuous assessment of the manpower situation

The volume of employment which can be created annually will be assessed and necessary measures taken to ensure that employment targets are fulfilled. There is no machinery at the moment to perform the tasks of continuous assessment of the manpower situation, especially to carry out investigations to provide adequate background for the formulation of appropriate policies in the fields of human resource development and utilisation, to evaluate the effects of various policy decisions on the labour market and to supervise the implementation of recommendations on manpower.

### b) Co-ordination :

In addition to achieving employment targets implied by available projections, government will undertake research and implement measures for branches of activities with employment generating capacity, to ensure that in establishing priorities for projects by Ministries, Agencies and the private sector appropriate weight will be given to the need for maximising employment.

### c) Workers participation in management :

The Supreme Revolutionary Council has accepted as a declared policy the participation of workers in decision-making in matters of national importance as well as in establishments where they are employed. Workers' Advisory Boards have therefore been established early in 1972 in all state organs employing 30 or more workers. The Programme period will see the strengthening of the functions of the Boards concerning the workers' rights such as leave, bonus and promotion and efficiency of the enterprises, planning for and implementation of new schemes and ensuring the safety of the enterprise.

### d) Training of labour force :

Training needs exist for the new workers to be added to the labour force as well as for some of those currently employed. Government will take steps to ensure that top priority will be given to the implementation of training programmes discussed in this document and employees are released as much as possible to participate in upgrading schemes. Government will also implement programmes for training of personnel working in the private sector through a system of apprentice-ship, in-service training and formal training courses.

### e) Integrated development :

Somalia is a nation of workers. Its development programme therefore cannot confine itself only to objectives of workers training, employment and working conditions in their place of work. The worker is the citizen and the State belongs to him. The wealth and income of the country are the property of the workers and this property shall be used for multi-faced development of the workers' personality. The objective and strategy of development of labour, employment and training therefore will endeavour to assist through policies, programmes and projects the physical, intellectual, cultural and political development of all workers in the country. Workers participation in self-help activities and the dominent role assigned to them in political field would inculcate in them, the dignity of labour and their responsibility in the social and economic development of the country.

## PROJECTS

The following projects will be implemented during the Programme period.

### 1. Strengthening of Labour Administration :

The inspection services of the labour is weak and the labour inspectors who are empowered to inspect any business establishment in order to ensure strict compliance with the provisions of the Somali Labour Code are unable to carry out their duties due to lack of transport. In order to strengthen the labour administration, the inspectors should become more mobile. With the creation of the following regions it became necessary for the Labour Department to open new offices in the following regions :

a) **Togdheer Region :**
   - i. Regional Office
   - ii. District Office

b) **Hiran Region :**
   - i. Regional Office
   - ii. District Office

c) **Sanaag Region :**
   - i. Regional Office
   - ii. District

d) **Mudug Region :**
   - i. Regional Office
   - ii. District Office

e) **Galgudud Region :**
   - i. Regional Office
   - ii. District Office

The Programme provides So. Shs. 405,000 for financing the implementation of this project.

### 2. Manpower Assessment and Planning :

This project will be implemented in order to :-

1) make a continuous appraisal of the current and likely future manpower situation in order to provide an adequate basis for a detailed consideration of manpower aspects of future development Programmes and Plans.

2) evaluate the present capacity of educational and training facilities to meet the requirement for skilled manpower.

3) assist in the formulation of employment policy objectives and to indicate programmes to attain those objectives.

4) organise a comprehensive programme of manpower information on a continuing basis for present and future economic planning.

The total cost of the project will be So. Shs. 244.000.

### 3. Vocational Rehabilitation Services :

At the present time, there are no vocational rehabilitation services or facilities whatsoever in Somali Democratic Republic. Only a very few qualified professionals are available to undertake such services. The establishment of vocational assessment, vocational training, sheltered employment and placement services for the disabled is very urgently required and the need to train specialised staff is most pressing.

Government has reiterated its keen interest on several occasion over the past six years in receiving technical assistance in this field. Through this project it is anticipated that a steady flow of disabled will become economically independent both to their and their country's advantage.

The project will cost So. Shs. 849.800 during 1974-1978.

### 4. Physical Culture and Sports Institute and Stadium

In the last years since October Revolution, sports achieved a rapid growth in Somali Democratic Republic. But for the past years of neglect before Revolution and lack of sufficient facilities, the status of sports would have been of a higher standard of development. It is the policy of the government to widen the outlook towards a better and systematic programme in sport through planning in the future. It is therefore desirable to establish an institution for higher training which will assist in the promotion of sports development.

In this connection, the Ministry of Labour and Sports will establish a Physical-culture and Sports Institute. This Institute will enroll 30 intermediate school leavers every year, who possess the necessary talent in sports and train them as qualified physical training teachers for the schools, as well as coaches for regional and district sports teams, after completion of three years intensive course in the Institute.

There is at present no gymnasium included in the proposed stadium to be constructed. Hence a gymnasium for the Institute will be constructed within the compound of the stadium. The stadium will provide the necessary accommodation and classes for the trainees.

Negotiations are under way with some friendly governments to provide instructors and textbooks for the Institute.

The cost of the project excluding the cost of the stadium will be So. Shs. 1.430 million.

### 5. Somali Institute of Development Administration and Management:

The future activities of the Somali Institute of Public Administration, beginning from 1974, will introduce a concerted effort in administrative and managerial improvement and consequently will function through two main wings : a wing for administrative and management and a wing for training in management services within the National University.

The wing for administrative and management improvement will continue to function with the original purpose and activities of the Somali Institute of Public Administration with more specific tasks in its training, research and consultancy services. A series of diploma courses in project analysis, financial management, personnel administration, planning, marketin, etc. will be introduced while redesignating the Institute as the Somali Institute of Development Administration and Management (SIDAM).

Training in SIDAM will be complementary to the internal training programmes of the Ministries and Agencies and related to their requirements. During the Programme period SIDAM will undertake a series of short specialised courses; diploma courses of 6 to 9 months duration, seminars of senior management personnel and some secretarial and clerical courses. More than 3000 officials in government Ministries and Agencies are likely to benefit from the programme at SIDAM.

During the Programme period, the Somali staff in the Institute will be increased to 30 from the present strengh of 14. A staff development plan will be implemented during this period and a total of 30 long-term fellowships will be awarded in different specialities.

United Nations Technical Assistance will be available during 1974-1976 to suppcrt the Institute in its initial phase of development .

The project will cost So. Shs. 6.640 million during the Programme period.

## 6. Revolutionary Youth Camps :

Seven Revolutionary Youth Camps have already been established during 1971-1973 at a total cost of So. Shs. 2.646 million. A total of 1.850 students have been enrolled at a time in these camps, each of them receiving at the elementary level theoretical and practical training in general education, functional education mainly in the field of livestock and agriculture, special orienatation, self-help activities, political orienation and military training.

The results achieved by this project have been very encouraging and it is proposed to expand the project to organise 7 more camps during the 1974-1978 period with facilities to train a total of 276 students. The following table shows the locations of the existing camps.

### CAMPS AND ENROLLMENT

| | Location | Number of Students |
|---|---|---|
| 1. | Lafoole | 1,230 |
| 2. | Burco | 90 |
| 3. | Hargeisa | 110 |
| 4. | Beledwenye | 60 |
| 5. | Baydhaba | 240 |
| 6. | Kismayu | 60 |
| 7. | Galkayo | 60 |
| | ToTal | 1,850 |

Four new camps will be established in 1974 and three more in 1975 in the following locations :

| | Location | Year of Eestablishing | Number of Students |
|---|---|---|---|
| 1. | Jowhar | 1974 | 60 |
| 2. | Marka | 1974 | 60 |
| 3. | Galgadud | 1974 | 30 |
| 4. | Sanaag | 1974 | 30 |
| 5. | Gedo | 1975 | 30 |
| 6. | Bakool | 1975 | 30 |
| 7. | Bari | 1975 | 30 |

The total cost of the project will be So. Shs. 1.750 millions.

### SECTOR : Labour, Employment, Training - TOTAL INVESTMENT COST

(So. Shillings)

| Sl. No. | PROJECTS | 1974-78 | 1974 | 1975 | 1976 | 1977 | 1978 |
|---|---|---|---|---|---|---|---|
| 1. | Strengthenin Labour Administration | 405,000 | 250,000 | 155,000 | — | — | — |
| 2. | Manpower Assessment and Planning. | 244,000 | 26,000 | 76,000 | 41,000 | 50,000 | 51,000 |
| 3. | Vocational Rehabilitation Service | 849,800 | 528,400 | 201,400 | 40,000 | 40,000 | 40,000 |
| 4. | Physical Culture & Sports Institute | 1,430,160 | 800,000 | 70,240 | 142,480 | 208,720 | 208,720 |
| 5. | S.I.D.A.M. | 6,640,000 | 1,170,000 | 2,349,100 | 2,920,000 | 200,000 | — |
| 6. | Revolutionary Youth Camps | 1,750,000 | 1,000,000 | 750,000 | — | — | — |
| | **TOTAL** | **11,318,960** | 3,775,300 | **3,601,740** | **3,143,480** | **498,720** | **299,720** |

# XIV. STATISTICS AND CARTOGRAPHY

## A. Statistics

### Objectives

The main objectives of activities in the field of statistics during the period of the Development Programme 1974-1978 will be to continue the activities already initiated towards : -

a) filling gaps in major statistical information in the national statistical system,

b) update, revise and extend the coverage of existing statistics, and

c) strengthen the national statistical organisation in order to make it an effective tool in building up the statistical pre-requisites required tc make development planning and policy making meaningful, and for this purpose strengthen, standarise and co-ordinate statistical activities in the Ministries, Agencies and private enterprise establishments.

The period of the Development Programme will also see the reorganisation of the Central Statistical Department. The re-organisation will consist of two major actions. In the first place, the regional census offices established as part of the 1975 census operations will be formed into Regional Statistical Offices for overall statistical activities in the regions. These activities will evolve liaison with the regional and district administration for establishing a system of official statistics as part of development administration. Secondly the regional offices will also be used as the administrative focal points of organisation for surveys and studies conducted by the Central Statistical Department as well as other organs of the government at the local level.

The second aspect of the re-organisation of the department will be the establishment of a number of sections in the department to deal with specialized branches of statistical activities. This will consist of sections for agricultural statistics, demographic studies, national accounts, prices, social statistics, sample surveys, research and training and publication.

Another important aspect which will be given recognition during the re-organisation will be a training programme consisting of in-service training for the staff of the department as well as post-graduate training for a selected number of officers and graduate and training at the university level for middle level personnel. Post-graduate training will be organised for seven officers in as many different fields of specialisation while middle level training will be made available to ten persons.

Special emphasis will be given during the programme period to continue the work initiated during the earlier period to help in strengthening statistical activities in the various Ministries and Agencies. This work is of great importance due to the fact that a national statistical system can evolve only as a result of comprehensive organisation of statistical data collection, processing and interpretation at various levels of government administration. While the field of statistics will remain a specialised one, there is an imperative need to organise statistical data collection in a manner which will enable the participation of a maximum number of persons at various levels of sophistication along the entire line of administration in both the public and private sectors of activity. It is also foreseen that a number of steps will be taken during the programme period to establish a system of national accounts for Somalia.

## PROJECTS

### 1. Census of Population and Livestock

Even though some partial studies on estimates of population of Somalia have been undertaken at various times, no comprehensive census of the human and livestock population has been conducted till now. Pilot investigations on the feasibility and methodology of a census of population on the livestock have been going on since 1971 and it has been decided that a census will be undertaken during the period January to March, 1975. Three more pilot studies will be conducted during 1974.

The census enumeration will be in two phases. During the first phase a simultaneous complete enumeration of all urban and rural population will be made. The census will run for 7 days in the urban and 22 days in the rural areas. The phase two operations will be a sample enumeration of the nomadic population over a period of ten days with water points in the country as the primary sampling units.

Administratively, the regional and district chairmen will function as census commissioners. Fifteen regional offices will be established by the middle of 1974 to facilitate the census enumeration. In addition to those on human and livestock population, information on type and use of dwelling units in all urban and rural areas will also be collected.

The census work will be followed by a post enumeration survey to evaluate the reliability of the census, covering a one percent sample of all enumeration units.

The total cost of the project will be So. Shs. 7.964 million excluding the cost of electronic data processing. The costs for the latter will be added to the project cost when estimates are finalised.

## 2. National Sample Surveys

With the completion of the census in 1975, the time will be appropriate to organise a number of sample surveys in the country to fill in the wide gaps in statistics on the socio-economic conditions in the country. A series of national sample surveys will therefore be organised beginning from 1975. These surveys will cover two major aspects. Firstly, a number of demographic studies will be undertaken to study the population dynamics in the country, as an aspect of inter-censal work and to elaborate demographic characteristics of the population through special sample surveys among the nomadic and other sections of the population to determine levels of fertility and mortality in the country. The second major component of the sample surveys will be a number of multipurpose household surveys which collect information on demography, labour force characteristics, household enterprises and family budget. These items of information will constitute an important component of a system of national accounts. The total cost of this project will be So. Shs. 150,000. From 1977 onwards these surveys will be incorporated as a regular activity of the Central Statistical Department.

## 3. Family Budget Surveys

In addition to a study of family budgets during the course of the national sample surveys, special family living studies covering representative groups of households of different income levels and different household types are proposed to be conducted during 1976 in Mogadishu, Hargeisa and Kismayo. This will enable the Department to update the consumer price index for Mogadishu and prepare indices for Hargeisa and Kismayo. The field investigation for every surveys will be of sample households for one month in every quarter during a whole year. The project will cost So. Shs. 150,000.

## 4. Census of Industries

As soon as the census of population and livestock is completed in 1975, a census of industries is proposed to be conducted. The census will give the basic information on the industrial structure in the country which could be used as bench-mark data for future surveys of industries. The surveys of industrial production which have been going on during the past years were confined to industrial establishments employing five or more persons and therefore left out a large number of small scale establishments which are significant from the stand point of both total output and employment in the industrial sector. Even for those establishments which were enumerated the annual surveys collect a limited number of key-economic indicators like employment, gross output, value added and capital formation. The census of industry which will cover all industrial establishments in the country will therefore supply the frame on which annual surveys of industrial establishments can be conducted with greater coverage and in greater depth. The annual survey during 1976-77-78 will be designed to enumerate all the large establishments and a sample of the smaller establishments.

40 enumerators and 10 supervisors will be required for a period of three months to complete the Census Industries. The total cost of the project will be So. Shs. 70,000.

## 5. Census of Agriculture

Over the past years a limited number of studies on parts of the agricultural sector have been made. However, these studies remain partial and knowledge about the sector as a whole is incomplete. In order to enable a clear understanding of the agricultural activities in the country, it has been proposed that an agricultural census should be conducted sometime after the end of the present Development Programme, covering basic information on number and type of holdings, area under cultivation, crops and informatoni on the more important cultural practices.

During 1976, a number of pilot studies are proposed to be conducted to evolve the methodology feasible in Somalia for conducting an agricultural census. Parallely, work on the preparation of a frame of agricultural holdings will be undertaken.

The studies will be mainly confined to Regions where agricultural crops are heavily concentrated. A tentative selection of regions and crops is a follows :-

a) Lower Juba (Banana plantations, grapefruits, mango, cotton and other agricultural crops including cereals).

b) Upper Juba (cereals, tobacco and other agricultural crops).

c) Lower Shabelle (cereals, banana, grape-fruits, sesame, tomato, cotton and other agricultural crops).

d) Middle Shabelle (cereals, sugar cane, grape-fruits, and other agricultural crops).

e) Bari and Togdheer (incense, myrrh and dates).

f) North-West Region (cereals, dates and other agricultural crops).

A sample of villages and/or holdings will be selected for the surveys generally, but commercial plantations and holding of incense and myrrh will from domains of special studies. Four enumerators and one supervisor will be required for each region to carry out the feasibility studies for the census. During 1978, work will be intensified to update the frame which will be used for the agricultural census. The total cost of the project will be So. Shs. 375,000.

### 6. Regional Statistical Offices

13 regional census offices are being established for the work of the 1975 census of population and livestock. After the census is completed the regional offices will be converted to Regional Statistical Offices. Buildings are required to locate the offices permanently and the Programme provides So. Shs. 500,000 as part of the cost of construction. The remaining part of the cost which has not been taken credit for in the estimates in the Programme document will be met through self-help work.

## B. CARTOGRAPHY

### Strategy of Development

A limited programme for cartography was included in the Development Programme 1971-73 consisting of projects for preparation of topographical mapping, preliminary projects for vertical and horizontal control and centralisation of mapping units. These projects were part of a larger programme which was included in the Short-term Development

Programme 1968-70 but which was not implemented due to financial and manpower constraints. Only limited progress has been achieved in implementation of the projects during 1971-73.

Preparation of topographic mapping for the whole country which has been started in 1973 in the scales 1:100,000 and 1:200,00 will be the central project in the programme for cartography during the period of the new Development Programme. In addition to this basic work, projects for triangulation and levelling of first order and limited work on preparation of topographical maps in the scale 1:5,000 for use in town planning will also be implemented. The implementation capacity in this sector has been limited due to shortage of trained personnel and it is hoped that during the new Development Programme period additional personnel will be available through the training given on the country-wide topographical mapping work.

## PROJECTS

### 1. Topographic Mapping

Beginning from 1973 a large project for topographic mapping of the whole country has been started with bilateral assistance. The project will be completed by 1978 and a set of maps in the scale 1:100,000 and 1:200,000 will be available by 1978. The maps will be one of the basic documents which will assist in physical planning of the country through elaboration of development projects for agricultural and water development, pasture and range conservation, town planning and rural housing. The project will involve work on air photogrammetry, ground control and interpretation, plotting and cartography. The final phase of the work in plotting and cartography is expected to be completed in a cartographic institute abroad due to lack of facilities in Somalia. This phase of the work will also assure that Somali technicians are associated and trained in the work.

Out of an estimated total project cost of So. Shs. 90 million, the expenditure during the programme period will be So. Shs. 75 million.

### 2. Triangulation and Levelling First Order

Triangulation or trilateration is the main part of a basic ground control system consisting of concrete monuments and towers with known horizontal co-ordinates. The first fundamental step to build up a ground control system is the establishment of triangulation. First order levelling is the other main component of a basic ground control system which gives the position of the ground control network in relation to the sea level. In Somalia, at present no basic work on ground control has been done and therefore there is a high priority for implementing triangulation and levelling of the first order. At a subsequent stage, triangulation and levelling of the second order will follow the work initiated during the current Development Programme period. The total cost of the project will be So. Shs. 18,028 million, the cost of triangulation being So. Shs. 10.189 million and levelling So. Shs. 7.839 million.

## 3. Mapping for Town Planning

It is proposed to conduct special mapping work for use in town planning in the scale 1:5000 for the important towns in the country. A special committee which went into the problems of town planning has strongly recommended the need for detalied maps of the towns especially for Mogadishu and the other big towns. It is recognised that such maps would be essential in planning the location of water distribution systems, electricity, telephone and road networks and dividing the town into special zones such as green zone, recreation zone, trade zone, industry zone etc. The growth of towns in the country has been rapid and therefore in order to establish proper town planning proceedings, priority is being given to this project.

The activities of this project will consist of aerial photography, triangulation second order, levelling third order, aerial triangulation, plotting and cartography work. The total cost of the project will be So. Shs. 3.792 million.

## SECTOR: Statistics & Cartography: TOTAL INVESTMENT COST

(So. Shillings)

| Sl. No. | PROJECTS | 1974-78 | 1974 | 1975 | 1976 | 1977 | 1978 |
|---|---|---|---|---|---|---|---|
| | **A. STATISTICS** | | | | | | |
| 1. | Census of Population & Livestock | 7,964,310 | 3,493,370 | 2,51,690 | 769,250 | 640,000 | 540,000 |
| 2. | National Sample Surveys | 149,750 | — | 50,000 | 99,750 | — | — |
| 3. | Family Budget Surveys | 150,000 | — | — | 150,000 | — | — |
| 4. | Census of Industries | 120,000 | 50,000 | 70,000 | — | — | — |
| 5. | Census of Agriculture, Feasibility | 375,500 | — | | 37,750 | 37,750 | 300,000 |
| 6. | Regional Statistical Offices | 520,000 | | 520,000 | — | — | — |
| | **TOTAL** | **9,279,560** | **3,543,370** | **3,161,690** | **1,056,750** | **677,750** | **840,000** |
| | **B. CARTOGRAPHY** | | | | | | |
| 1. | Topographic Mapping | 75,000,000 | 22,000,000 | 22,000,000 | 15,500,000 | 15,500,000 | — |
| 2. | Triangulation and Levelling | 18,027,700 | 4,243,500 | 5,562,500 | 5,716,400 | 2,505,300 | — |
| 3. | Mapping for Town Planning | 3,791,900 | 116,700 | 918,800 | 918,800 | 918,800 | 918,800 |
| | **TOTAL** | **96,819,600** | **26,360,200** | **28,481,300** | **22,135,200** | **18,924,100** | **918,800** |
| | **GRAND TOTAL** | **106,099,160** | **29,903,570** | **31,642,990** | **23,196,950** | **19,601,850** | **1,758,800** |

## XV. TOURISM

In most part of the world tourism is growing at a rapid rate. This growth is attributable to the high incomes in Europe, the revolution in transport facilitated by the jet age, the prestige that goes with tourism which is vigorously promoted by the international tourist agencies and the increased appreciation of scenic and natural beauty.

The industry is becoming a major foreign exchange earner to a number of countries. In Somalia tourism is in its early stage of development and the country will not be a major tourist attraction in a very short time because of the abscences of the basic infrastructure for the industry; such as hotels, national parks and transport facilities. These are the basic minimum pre-requisites for tourism development.

The country has a number of major attractions to offer to international tourists and there are immense possibilities to develop a local-tourism industry. The first major resource to be exploited for tourism is wild-life. Somalia is probably one of the few places where wild-life is still in its natural unspoilt habitat. Even though the wild-life are concentrated in the Southern parts, the rest of the country also offers large potentialities for game watching and limited hunting. The second major natural tourist attraction are the beaches. Somalia has a coastline of 2,800 km. length which offer tourists a year-round pleasure and sports. The highlands of the country are also tremendously potential resources that could attract tourists from the Gulf due to its pleasant climate, game and mountainous scenic beauty.

Realising the importance of tourism to the national economy on the one hand and the major exploitable tourist resources of the country on the other, the Government has established a Ministry for Tourism Development. It is the responsibility of this Ministry to plan the future of the sector in a systematic and organised manner, keeping in mind the limited financial resources that could be tied up in an altogether new sector.

The major constraints in the field of tourism are hotels and lodges, and an efficient transport and communication facilities. The Development Programme is putting emphasis on relaxing these basic constraints. The transport network of the country will be fully developed to eliminate the major gaps in order to open up the country. A number of airports will also be improved to facilitate movements of goods and basic services more efficiently. And improvement in telecommunication will be undertaken. All these investments will facilitate the development of tourism both internationally and locally. The major handicap of the sector is the development of hotel facilities in the major tourist attraction areas like Kismayu, Shabelle Regions and the highlands of Hargeisa.

In the programme period an investment of So. Shs. 12.59 million will be made. This investment will provide hotels, rest houses and tourist village in Mogadishu, Marka, Brava, Ga'anlibaah, Saadu-Diin, Hargeisa and Kismayu; beach cabins at Mogadishu, Marka, Brava and Geziira, and lodges in the Kismayo National Park.

These are basic facilities that could set the basis for the development of the sector and would not unduely tie up scarce resources to areas whose exploitation is seen as a long-term endeavour.

| PROJECTS | 1974-1978 | 1974 | 1975 | 1976 | 1977 | 1978 |
|---|---|---|---|---|---|---|
| 1. Second Class hotel Mog. | 3.000.000 | 3.000.000 | — | — | — | — |
| 2. Extension Hargeisa Club | 1.800.000 | — | 1.800.000 | — | — | — |
| 3. Improvements National Park | 1.400.000 | — | 1.400.000 | — | — | — |
| 4. Tourist Village | 1.000.000 | — | — | 1.000.000 | — | — |
| 5. Hotel Marca | 600.000 | — | — | 600.000 | — | — |
| 6. Rest House Gaanlibaah | 500.000 | — | — | 500.000 | — | — |
| 7. Rest House Barawa | 500.000 | — | — | 500.000 | — | — |
| 8. Lodges in N. Park, Kismayo | 360.000 | — | — | 360.000 | — | — |
| 9. Hotel Beach Saadin | 870.000 | — | — | — | 870.000 | — |
| 10. Rest House, Erigavo | 500.000 | — | — | — | 500.000 | — |
| 11. Beach Cabin | 2.060.000 | — | — | — | 800.000 | 1.260.000 |
|  | 12.590.000 | 3.000.000 | 3.200.000 | 2.960.000 | 2.170.000 | 1.260.000 |

# XVI. INFORMATION

## Setting and Strategy of Development

Mass media plays an important role in socio-economic change of the less developed countries. An improved and well-coordinated communication media - both in coverage and effectiveness - will have a crucial role in Somalia's development effort: It will raise the consciousness of the masses in development and therefore channel their energy to constructive work and priority areas for development; it will disseminate knowledge and information throughout the country and thus keep the public abreast of new changes and the activity of the Revolution; it will help to generate among the people a sense of cohesiveness and dedication to higher national goals. Taking into account these consideration, it is obvious that development of the communication media is one of the pre-requisites for the successful implementation of the five-year Development Programme. Better developed and well-planned mass media will be an effective tool for mobilising and enlisting the support of the masses for development and at the same time inculcating in them a sense of enduring hardships and sacrifice whenever that is necessary for the development of the country. Hence, a total outlay of So. Shs. 37.116 million is earmarked for developing this sector during the five-year Development Programme. This investment will be allocated among the projects discussed below.

### 1. Regional Information Centres

This project is very vital in the promotion of wide coverage of news from and to the Regions of the country. Since national guidance and orientation is an important strategy and a major function of the Ministry of Information, there is an urgent need for establishing Regional Information Centres in order to arouse the interest of the people in development and also to enable them to have an easy reach to what their Revolution is doing in the construction of the country. Further, these centres will be important for orienting the public to the principles and practice of socialism.

The basic components of this project will consist of the reconstruction of 10 offices at Sanaag, Middle Shabelle, North-West, Togdheer, Bari, Lower Juba, Mudug, Hiran and Galgudud and a station for Bay, Gedo and Bakool. Each centre will serve as the nuclei of information for the region.

Apart from the construction of the buildings, acquisition and installation of the necessary equipment, an outside broadcasting vans required for the work will be an essential component of the project. Moreover the manpower requirement of the project will be about 60 persons in which 30 will be technicians and reporters and the rest will be drivers, operators and other supporting staff. The project is planned to be completed within the first two years of the programme and will require an investment of So. Shs. 4,400,000.

## 2. Establishment of Transmitters

This project will strengthen and increase the range of reception of Radio Somalia programmes, streamline the quality of reception of the programmes and provide additional channels of transmission i.e. two short wave and one medium wave. The installation of the following three transmitters has already been approved by the Government.

| | | | |
|---|---|---|---|
| a) | Mogadishu | 150 kw | Medium wave |
| b) | Mogadishu | 50 kw | Short wave |
| c) | Hargeisa | 25 kw | Short wave |

The total investment expenditure of this project is estimated to be So. Shs. 14,146,400. It is planned to be completed by 1975.

## 3. Studios for Broadcasting Services

This project includes the construction of 4 studios in Hargeisa and 3 in Mogadishu. Those to be constructed in Mogadishu are intented for the new 150 kw medium wave transmitter and therefore obtaining the opportunity to get two parellel channels of transmission as often broadcasting services do. The 4 studios for Hargeisa is intented to suit the production of programmes for the station because its present studios are too old and would not provide the required facilities for programme production. The total investment of the project is So. Shs. 3,058,000.

## 4. Establishment of TV Project

Establishment of a TV broadcasting station will have the following important functions.

a) It will be án important means of literacy campaign by teaching the people through the TV.

b) It will provide common entertainment for the people.

c) It will acquaint the people with the latest discoveries and scientific achievements.

d) It will encourage the young to develop various talents and it is a valuable educational means.

e) It will raise the standard of arts especially music and literature.

f) It will develop uniformity of our society in taste and consumption patterns, and also spread a feeling of national solidarity among various groups of our society.

g) It will be an effective tool for speeding our social transformations.

This project will be implementéd in stages. At the first stage a television broadcasting station will be installed to serve Mogadishu and its suburbs within a radius of 50 kms. At the same time a study of wide coverage involving of all aspects of TV will be undertaken. The second stage of expanding the TV will be dependent upon the study. The investment cost proposed for the first stage is So. Shs. 5.440,178 and it will be completed by the end of 1976.

## 5. National Theatre

As the national theatre is the main centre of artistic tradition of the country, it will have a significant role in transforming and developing the social and cultural activity of the country. National theatres are the means of creating professional theatrical talent. in the country. Hence, it is proposed to establish three projects during the Development Programme for that purpose. The primary objectives for these projects are to train artists in the country, such as actors, dancers, musicians, stage managers and conductors, secondly, to restructure Somali art into modern and scientific lines in such a way that it could play a positive contribution to our national development, thirdly, to project our artistic talents and cultural heritage to the outside world. The projects envisaged to be established are : -

1) Gramaphone Production Studio

2) Construction of an Artists' School, and

3) Establishment of Regional Musical Instruments Stores.

All the three projects are expected to be completed by 1975 with total cost of So. Shs. 700,000.

### 6. National Printing Agency

The National Printing Agency assumes very crucial position in the development of the country and it will undoubtedly be more so during the years to come. Several important development that took place during the Revolutionary period of the country made absolutely essential the expansion of the activities and reargamisation of the operation of the National Printing Agency.

First, it needs no emphasis to say that one of the biggest achievements made by our country since independence was the writing of Somali Language by adopting a new Script for it, and the immediate introduction of Somali as the only official language in the country. This fact has, therefore, increased manyfold the demand for printed Somali materials for Government transactions, school instructions and public consumption. Second, the Revolutionary Government in line with its policy of social ownership of the major productive factors of the economy for the benefit of the masses and also in order to reduce economic and social inequality by reducing private ownership, has nationalised all private printing institutions in the country. This major policy devolves the production of all printing materials, in the country on the National Printing Agency. Moreover, the introduction of a literacy camagin throughout the country has raised the level of the literacy rate of the Somali people and their demand for printed material. The measures have added new dimensions to the importance of and the role which the National Printing Agency has to play in the expanded Government activity as well as the increased social need for written materials.

Hence, in the light of the above considerations the five-year Development Programme envisages a total investment outlay of So. Shs. 11,370,893 to the National Printing Agency. This amount will primarily be used for purchase of equipment and machinery which are essential for the expansion and the modernisation of the Agency to cope with the needs of country. It is important to note that the whole planned investment outlay will be utilised in the first three years of the Programme.

During the five-year Development Programme it is estimated that output of locally printed materials will reach a level of 122,550,000 units i.e. an average annual production of 24,510,000 units. This expected total output will comprise of books for primary and secondary schools, books written or translated into Somali, Government Publication, etc. In addition, journals such as Xiddigta Oktoobar and the magazine (New Era) will be enlarged. It is also planned to construct 84 buildings which will consist of stores, printing houses and shops for selling the Agency's products. These buildings will be constructed in various parts of the country and the construction will be partly financed by the Ordinary Budget of the Agency and partly by self-help contributions.

## SECTOR : INFORMATION

## (DEVELOPMENT PROGRAMME 1974 - 1978)

STATEMENT No. 1

(In 1000 So. Shs.)

| Sl. No. | PROJECTS | 1974-78 | PLANNED OUTLAY<br>1974 | <br>1975 | <br>1976 | <br>1977 | <br>1978 |
|---|---|---|---|---|---|---|---|
| | | | (1) | (2) | (3) | (4) | (5) |
| 1. | Regional Information Centres | 4,400.0 | 2,800.0 | 1,600.0 | — | — | — |
| 2. | Transmitters | 14,146.4 | 12,731.8 | 1,414.6 | — | — | — |
| 3. | Studios for Broadcastin Services | 3,058.0 | 2,808.0 | 250.0 | — | — | — |
| 4. | National TV | 3,440.7 | — | 1,032.0 | 2,408.7 | — | — |
| 5. | National Theatre | 700.0 | 500.0 | 200.0 | — | — | — |
| 6. | National Broadcasting Service | 11,370.9 | 3,435.8 | 3,485.8 | 3,679.3 | — | — |
| | **TOTAL** | 37,116.0 | 22,685.6 | 8,342.4 | 6,088.0 | — | — |

## SECTOR : INFORMATION

## (DEVELOPMENT PROGRAMME 1974 - 1978)

**STATMENT No. 2**

| Sl. No. | PROJECTS | 1974-78 | PLANNED OUTLAY - EXTERNAL<br>1974 | 1975 | 1976 | 1977 | 1978 |
|---|---|---|---|---|---|---|---|
| | | | (1) | (2) | (3) | (4) | (5) |
| 1. | Regional Information Services | — | — | — | — | — | — |
| 2. | Transmitters | 10,804.4 | 9,724.0 | 1,080.4 | — | — | — |
| 3. | Studios for Broadcasting Services | 3,058.0 | 2,808.0 | 250.0 | — | — | — |
| 4. | National TV | 3,440.7 | — | 1,032.0 | 2,408.7 | — | — |
| 5. | National Theatre | — | — | — | — | — | — |
| 6. | National Printing Agency | — | — | — | — | — | — |
| | TOTAL | 17,305.1 | 12,532.0 | 2,362.4 | 2,408.7 | — | — |

## SECTOR : INFORMATION

## (DEVELOPMENT PROGRAMME 1974 - 1978)

**STATMENT No. 3**

(In So. Shs.)

| Sl. No. | PROJECTS | 1974-78 | PLANNED OUTLAY : INTERNAL<br>1974 | 1975 | 1976 | 1977 | 1978 |
|---|---|---|---|---|---|---|---|
| | | | (1) | (2) | (3) | (4) | (5) |
| 1. | Regional Information Services | 4,400.0 | 2,800.0 | 1,600.0 | — | — | — |
| 2. | Transmitters | 3,342.0 | 3,007.8 | 334.2 | — | — | — |
| 3. | Studios for Broadcasting Services | — | — | — | — | — | — |
| 4. | National TV | — | — | — | — | — | — |
| 5. | National Theatre | 700.0 | 500.0 | 200.0 | — | — | — |
| 6. | National Printing Agency | 11,370.9 | 3,845.8 | 3,845.8 | 3,679.3 | — | — |